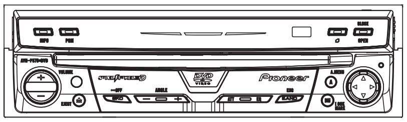
Pioneer sound.vision.soul

Service Manual



AVH-P5750DVD/RC

ORDER NO.
CRT3426

AV RECEIVER/DVD PLAYER 6.5 INCH WIDE DISPLAY

AVH-P5750DVD/RC
AVH-P5750DVD/RD
AVH-P5750DVD/RI

This service manual should be used together with the following manual(s):

Model No.	Order No.	Mech.Module	Remarks
CX-3078	CRT3257	MS-3V1	DVD Mech. Module:Circuit Description, Mech. Description, Disassembly

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For details, refer to "Important Check Points for Good Servicing".

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ⒸPIONEER CORPORATION 2005

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SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

RC, RI

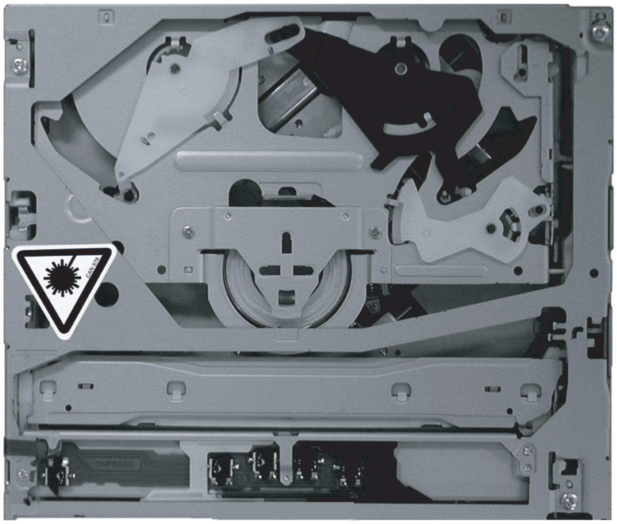
1. Safety Precautions for those who Service this Unit.

- **Follow the adjustment steps in the service manual when servicing this unit. When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.**

Caution:

1. **During repair or tests, minimum distance of 13cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

2. The triangular label is attached to the mechanism unit frame.



CAUTION

This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.

The following caution label appears on your unit.

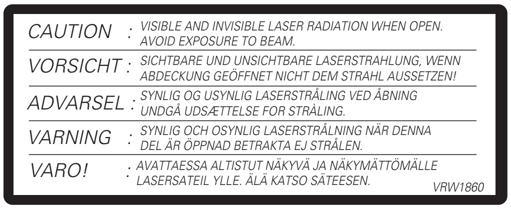
Location: on the bottom of the unit

CLASS 1
LASER PRODUCT

En

RI

On the top of the player.



CAUTION : VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.

VORSICHT : SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN!

ADVARSEL : SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING UNDGÅ UDSÆTTELSE FOR STRÀLING.

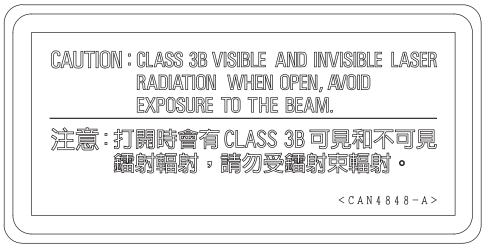
VARNING : SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD BETRAKTA EJ STRÅLEN.

VARO! : AVATTAESSA ALTISTUT NÄKYVÄ JA NÄKYMÄTTÖMÄLLE LASERSATEIL YLLE. ÄLÄ KATSO SÄTEESEN.

VRW1860

RC

在机器的机壳上。



CAUTION : CLASS 3B VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO THE BEAM.

注意：打開時會有 CLASS 3B 可見和不可見鐳射輻射，請勿受鐳射束輻射。

<CAN4848-A>

WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.

A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics

Wave length:

DVD:640~660nm

CD:770~810nm

DVD : 2.48mw(Emitting period :9sec.)

CD : 705µw(Emitting period : unlimited)

Additionla Laser Caution

Transistors Q1101 and Q1102 in PCB drive the laser diodes for DVD and CD respectively. When Q1101 or Q1102 is shorted between their terminals, the laser diodes for DVD or CD will radiate beam. If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

RI

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replaced only with the same or equivalent type recommended by the manufacture.

Discord used batteries according to the manufacture's instructions.

Service Precaution

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) .
4. After replacing the pickup unit, be sure to skew adjustment.
5. During disassembly, be sure to turn the power off since an internal IC might be destroyed when a connector is plugged or unplugged.

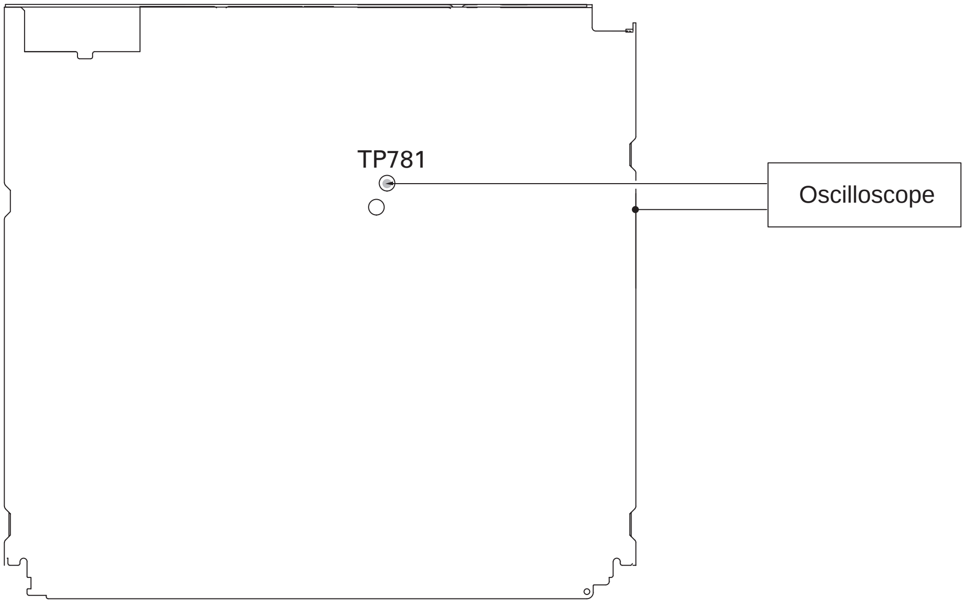
Inverter for LCD back light becomes a high voltage.

Operation Check of Fan Motor (Center)

After completing repair of this product, please confirm that the fan motor (center) is rotating.

Check Method

1. DVD video is played with this product.
2. The operation is normal if the operation noise (pulse) can be observed after connecting oscilloscope to TP781 located at the bottom of this product. Under this circumstance, be careful not to contact TP781 with chassis as the power fuse of fan motor (center) will blow out, disabling the fan motor (center) to rotate.



Bottom of this product

is a trademark of DVD Format/Logo Licensing Corporation.

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

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1. SPECIFICATIONS

General

Rated power source	14.4 V DC (allowable voltage range: 12.0 – 14.4 V DC)
Grounding system	Negative type
Max. current consumption	10.0 A
Backup current	5 mA
Dimensions (W × H × D):	
DIN	
Chassis	178 × 50 × 160 mm
Nose	188 × 58 × 30 mm
D	
Chassis	178 × 50 × 165 mm
Nose	170 × 46 × 25 mm
Weight	2.3 kg

Display

Screen size/aspect ratio	6.5 inch wide/16:9 (effective display area: 144 × 77 mm)
Pixels	336,960 (1,440 × 234)
Type	TFT active matrix, transmissive type
Color system	NTSC/PAL/SECAM/PAL-M compatible
Storage temperature range	–20 – +80 °C
Angle adjustment	50 – 110° (initial settings: 110°)

Audio

Continuous power output is 22 W per channel minimum into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.

Maximum power output	50 W × 4 50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Load impedance	4 Ω (4 – 8 Ω [2 Ω for 1 ch] allowable)
Preout max output level/output impedance	2.2 V/1kΩ
Equalizer (3-Band Parametric Equalizer):	
Low	
Frequency	40/80/100/160 Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12dB
Mid	
Frequency	200/500/1k/2k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12dB
High	
Frequency	3.15k/8k/10k/12.5k Hz
Q Factor	0.35/0.59/0.95/1.15 (+6 dB when boosted)
Gain	±12dB
Loudness contour:	
Low	+3.5 dB (100 Hz), +3 dB (10 kHz)
Mid	+10 dB (100 Hz), +6.5 dB (10 kHz)
High	+11 dB (100 Hz), +11 dB (10 kHz) (volume: –30 dB)
Tone controls:	
Bass	
Frequency	40/63/100/160 Hz
Gain	±12dB
Treble	
Frequency	2.5k/4k/6.3k/10k Hz
Gain	±12dB
HPF:	
Frequency	50/80/125 Hz
Slope	–12 dB/oct
Subwoofer:	
Frequency	50/80/125 Hz
Slope	–18 dB/oct
Gain	±12dB
Phase	Normal/Reverse

DVD Player

System	DVD video, Video CD, Compact disc audio system
Usable discs	DVD video, Video CD, Compact disc
Region number:	
for Southeast Asian models	3
for South American and Oceanian models	4
for Middle East Asian and South African models	2
Signal format:	
Sampling frequency	44.1/48/96 kHz
Number of quantization bits	16/20/24; linear
Frequency response	5 – 44,000 Hz (with DVD, at sampling frequency 96 kHz)

Signal-to-noise ratio	97 dB (1 kHz) (IEC-A network) (CD: 96 dB (1 kHz) (IEC-A network))
Dynamic range	95 dB (1 kHz) (CD: 94 dB (1 kHz))
Distortion	0.008 % (1 kHz)
Output level:	
Video	1.0 Vp-p/75 Ω (±0.2 V)
Audio	1.0 V (1 kHz, 0 dB)
Number of channels	2 (stereo)
MP3 decoding format	MPEG-1 & 2 Audio Layer 3
WMA decoding format	Ver. 7 & 8

FM tuner

Frequency range	87.5 – 108.0 MHz
Usable sensitivity	8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
50 dB quieting sensitivity	10 dBf (0.9 µV/75 Ω, mono)
Signal-to-noise ratio	75 dB (IEC-A network)
Distortion	0.3 % (at 65 dBf, 1 kHz, stereo) 0.1 % (at 65 dBf, 1 kHz, mono)
Frequency response	30 – 15,000 Hz (±3 dB)
Stereo separation	45 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range	531 – 1,602 kHz (9 kHz) 530 – 1,640 kHz (10 kHz)
Usable sensitivity	18 µV (S/N: 20 dB)
Signal-to-noise ratio	65 dB (IEC-A network)

Infrared remote control

Wavelength	945 nm
Output	typ; 10 mw/sr per Infrared LED

Note

Specifications and the design are subject to possible modifications without notice due to improvements. ■

A

B

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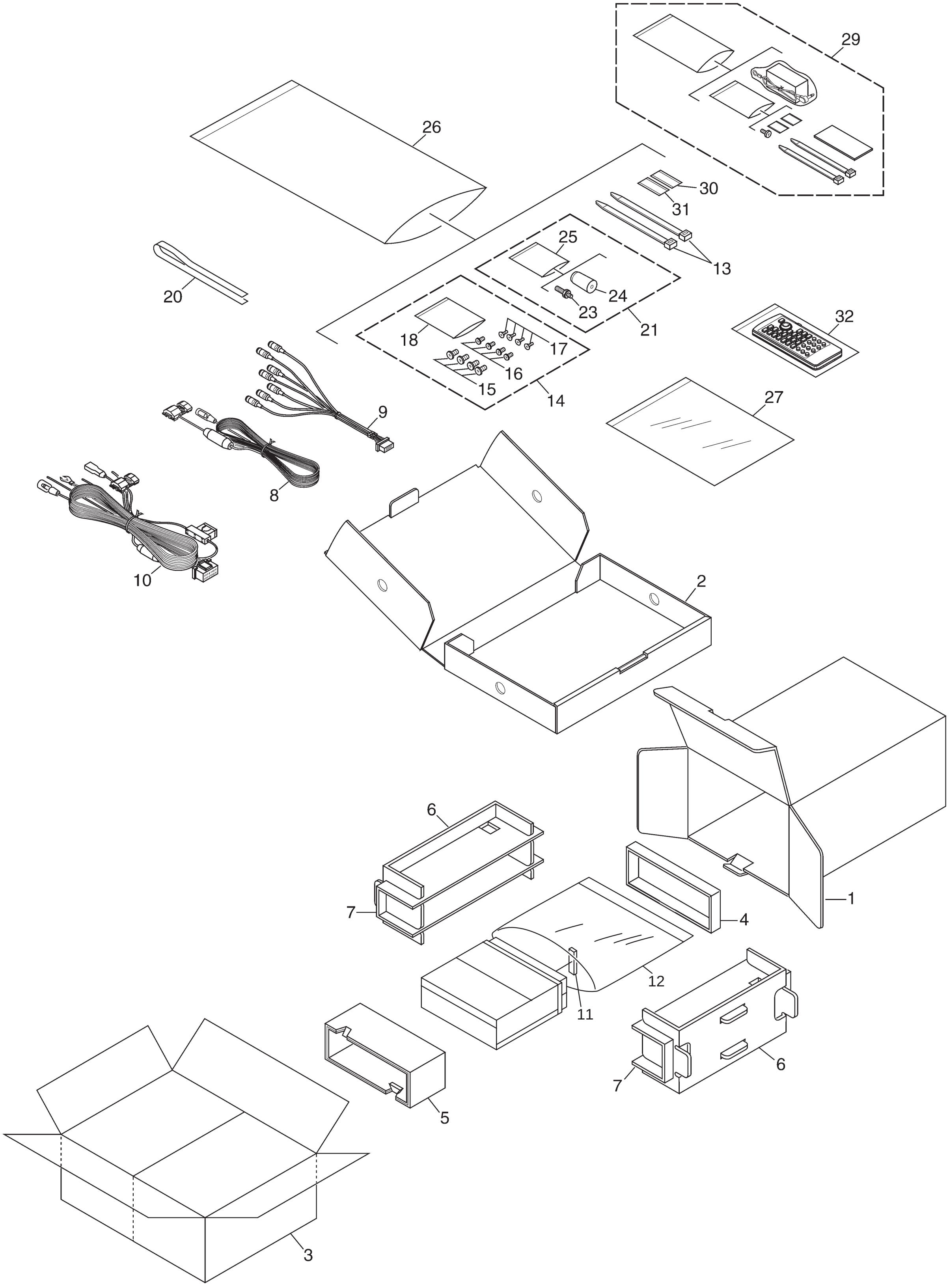
2. EXPLODED VIEWS AND PARTS LIST

*NOTES : • Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*

- *The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screw adjacent to ▽ mark on the product are used for disassembly.*
- *For the applying amount of lobricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)*

2.1 PACKING



(1) EXTERIOR SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Carton	CHG5495
	2	Sub Carton	CHG5270
	3	Contain Box	See Contrast table(2)
	4	Protector	CHP2387
	5	Protector	CHP2708
	6	Protector	CHP2706
	7	Protector	CHP2707
	8	Cord Assy	CDE7321
	9	Cord Assy	CDE7801
	10	Cord Assy	CDE7790
	11	Spacer	CNM9773
	12	Polyethylene Bag	CEG1088
*	13	Lock Tie	CNV-754
	14	Screw Assy	CEA5144
	15	Screw	BMZ50P060FTC
	16	Screw(M4x3)	CBA1870
	17	Screw	CMZ50P060FTC
*	18	Polyethylene Sheet	CNM4338

Mark	No.	Description	Part No.
	20	Sheet	CNM8603
	21	Accessory Assy	CEA3743
	23	Screw	CBA1650
	24	Bush	CNV1917
*	25	Polyethylene Bag	E36-615
*	26	Polyethylene Bag	CEG-158
	27-1	Polyethylene Bag	CEG1116
	27-2	Owner's Manual	CRB2055
	27-3	Owner's Manual	See Contrast table(2)
	27-4	Owner's Manual	See Contrast table(2)
	27-5	Installation Manual	See Contrast table(2)
	27-6	Caution Card	CRP1310
	28	•••••	
	29	Optical Cable Connection Box	See Contrast table(2)
	30	Fastener	CNM6544
	31	Fastener	CNM6545
	32	Remote Control Unit	CXC3075

(2) CONTRAST TABLE

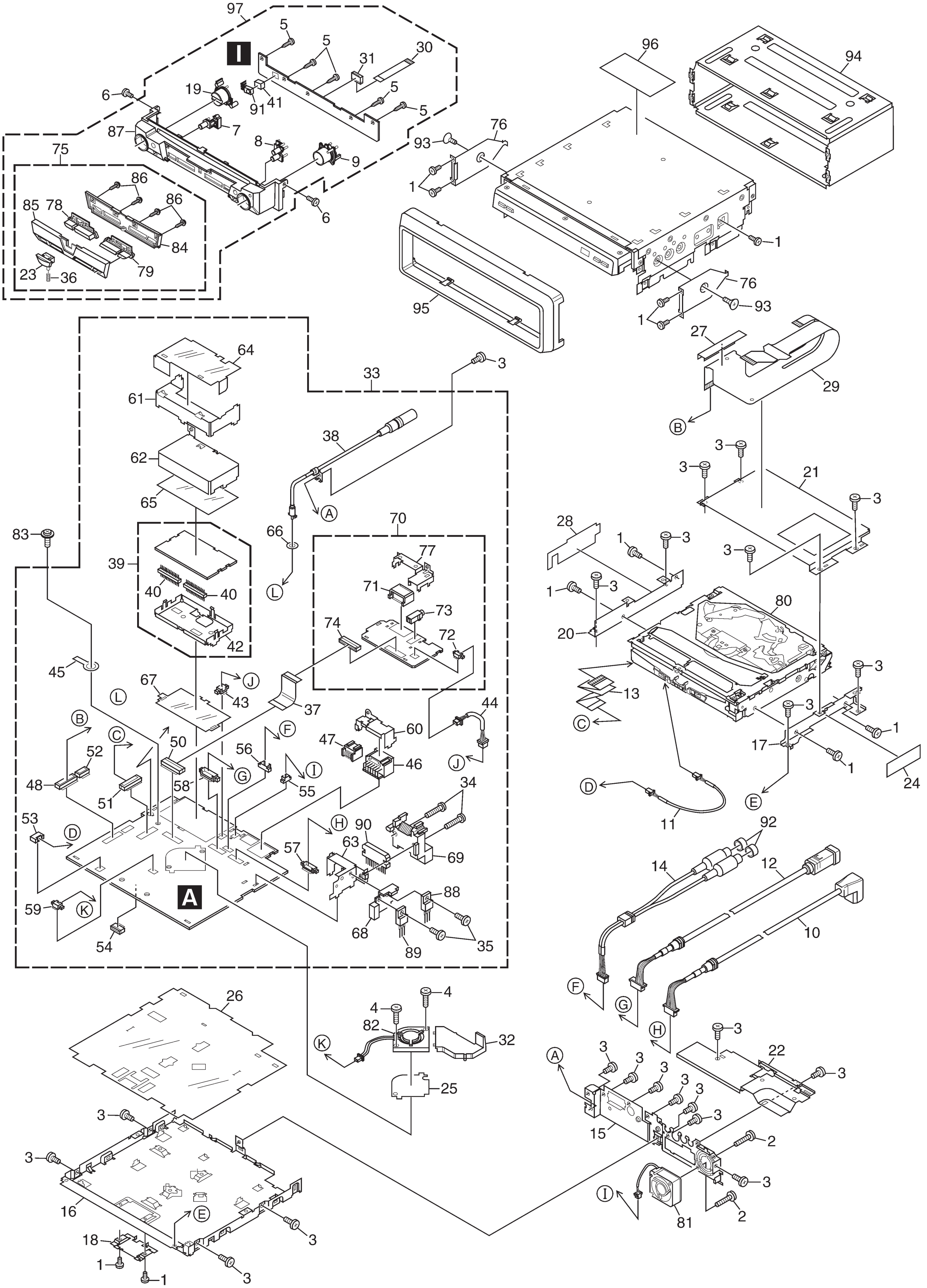
AVH-P5750DVD/RC, AVH-P5750DVD/RD and AVH-P5750DVD/RI are constructed the same except for the following:

Mark	No.	Description	AVH-P5750DVD/RC	AVH-P5750DVD/RD	AVH-P5750DVD/RI
	3	Contain Box	CHL5495	CHL5496	CHL5497
	27-3	Owner's Manual	CRB2056	CRB2058	CRB2061
	27-4	Owner's Manual	Not used	CRB2059	Not used
	27-5	Installation Manual	CRD3967	CRD3968	CRD3969
	29	Optical Cable Connection Box	CXC3584	CXC3584	Not used

Owner's Manual,Installation Manual

Part No.	Language
CRB2055	English
CRB2056	Traditional Chinese
CRB2058	Spanish
CRB2059	Portuguese(B)
CRB2061	Arabic
CRD3967	English, Traditional Chinese
CRD3968	English, Spanish, Portuguese(B)
CRD3969	English, Arabic

2.2 EXTERIOR(1)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EXTERIOR(1) SECTION PARTS LIST

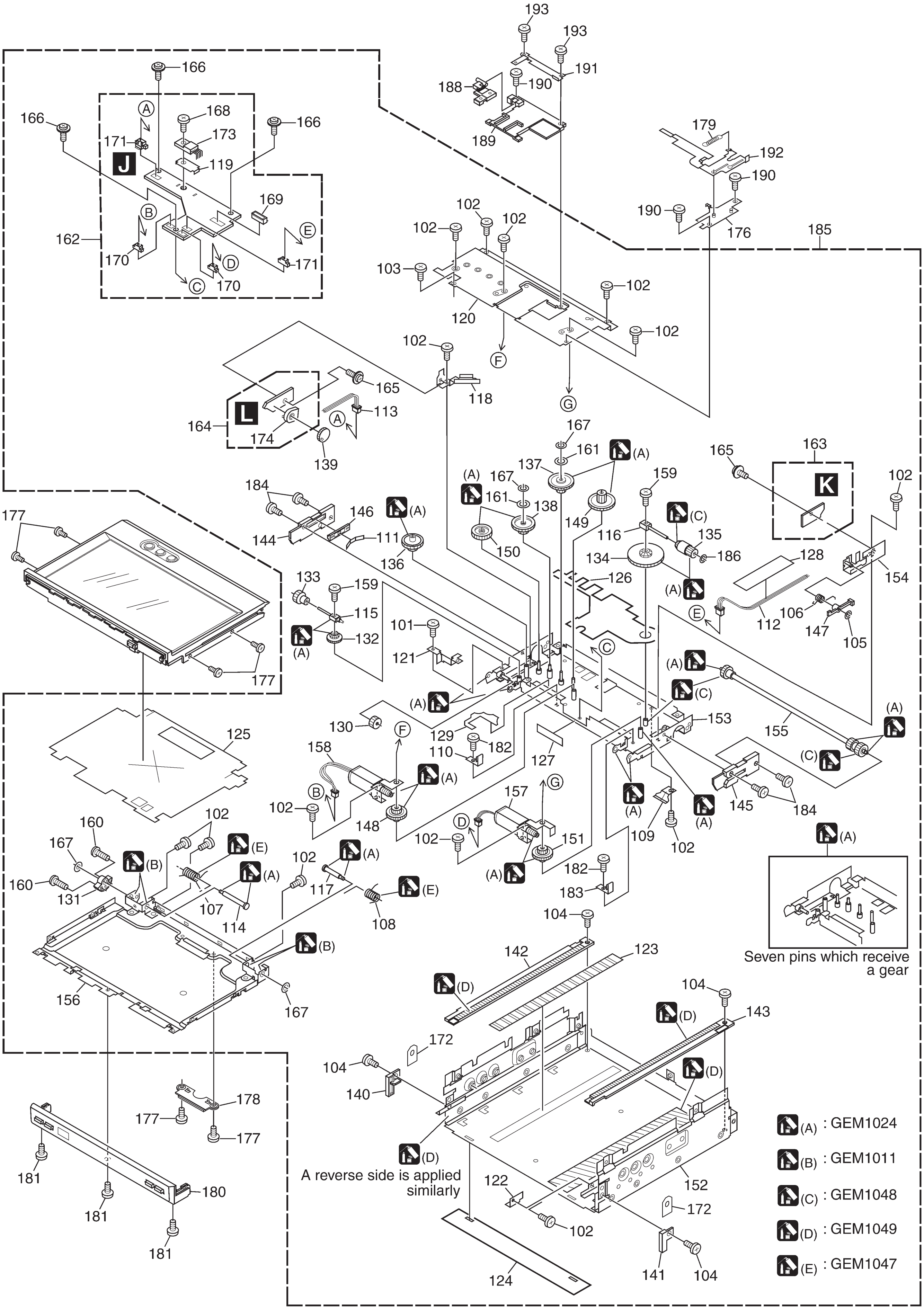
Mark	No.	Description	Part No.
	1	Screw	BMZ20P030FTB
	2	Screw	BMZ20P160FTC
	3	Screw	BMZ26P030FTC
	4	Screw(M2x8)	CBA1752
	5	Screw	BPZ20P060FTB
	6	Screw(M2x2)	CBA1872
	7	Button(EJECT)	CAC9062
	8	Button(A-BM)	CAC9088
	9	Button(CROSS)	CAC9089
	10	Cord Assy	CDE7176
	11	Cord	CDE7715
	12	Cord Assy	CDE7797
	13	Flat Cable	CDE7805
	14	Cord Assy	CDE7796
	15	Panel	CNB3101
	16	Case	CNB3104
	17	Bracket	CND1438
	18	Holder	CND1441
	19	Button(VOL)	CAC9061
	20	Bracket	CND2626
	21	Bracket	CND2627
	22	Holder	CND2628
	23	Lever Unit	CXC4588
	24	Insulator	CNM8495
	25	Insulator	CNM8864
	26	Insulator	CNM9398
	27	Sheet	CNM9517
	28	Insulator	CNM9750
	29	Flexible PCB	CNP8806
	30	FFC	CDE7807
	31	Connector(CN5501)	CKS4511
	32	Guide	CNV8415
	33	Mother Unit	See Contrast table(2)
	34	Screw	BMZ26P160FTC
	35	Screw	BSZ26P080FTC
	36	Spring	CBH2863
	37	Flat Cable	CDE7806
	38	Antenna Cable	CDH1348
	39	FM/AM Tuner Unit	CWE1651
	40	Connector(CN101,102)	CKS4653
	41	Cushion	CNM8671
	42	Holder	CND1432
	43	Connector(CN154)	CKS4823
	44	Cord	CDE7809
	45	Terminal(CN731)	CKF1064
	46	Connector(CN701)	CKM1332
	47	Socket(CN261)	CKM1457
	48	Connector(CN171)	CKS3751
	49	•••••	
	50	Connector(CN151)	CKS4052
	51	Connector(CN181)	CKS4052
	52	Connector(CN175)	CKS4068
	53	Connector(CN152)	CKS4282
	54	Connector(CN101)	CKS4511
	55	Connector(CN771)	CKS4822
	56	Connector(CN561)	CKS4824
	57	Connector(CN121)	CKS4830
	58	Connector(CN131)	CKS4832
	59	Connector(CN781)	CKS4977
	60	Holder	CND2629
	61	Holder	CND2630
	62	Shield	CND2631
	63	Holder	CND2633
	64	Insulator	CNM9400
	65	Insulator	CNM9521
	66	Spacer	CNM9522
	67	Spacer	CNM9523
	68	Heat Sink	CNR1703
	69	Heat Sink	CNR1784
	70	RGB Unit	CWM9817
	71	Connector(CN951)	CKS4497
	72	Connector(CN952)	CKS4978
	73	Jack(CN981)	CKN1022
	74	Connector(CN954)	CKS4052
	75	Detach Grille Assy	CXC4194
	76	Bracket	CND1482
	77	Holder	CND2634
	78	Button(SRC/-,+)	CAC9054
	79	Button(ATT,EQ/BAND)	CAC9056
	80	DVD Mechanism Module(MS-3V1)	CXK6418
	81	Fan Motor	CXM1262
	82	Fan Motor	CXM1276
	83	Screw	IMS26P040FTC
	84	Cover	CNS8178
	85	Grille	CNS8175
	86	Screw	IPS20P060FTB
	87	Grille Unit	CXC4208
	88	Transistor(Q892)	2SD2396
	89	IC(IC871)	NJM2388F84
	90	IC(IC241)	PAL007A
	91	IC(IC5501)	TSOP4840SB1
	92	Cap	CNV6727
	93	Screw	CMZ50P060FTC
	94	Holder	CNC9510
	95	Panel	CNS7481
	96	Label	See Contrast table(2)
	97	Grille Assy	CXC4189

(2) CONTRAST TABLE

AVH-P5750DVD/RC, AVH-P5750DVD/RD and AVH-P5750DVD/RI are constructed the same except for the following:

Mark	No.	Description	AVH-P5750DVD/RC	AVH-P5750DVD/RD	AVH-P5750DVD/RI
	33	Mother Unit	CWM9811	CWM9812	CWM9810
	96	Label	Not used	Not used	VRW1860

2.3 EXTERIOR(2)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(A)
(B)
(C)
(D)
(E)

Seven pins which receive a gear

A reverse side is applied similarly

(A) : GEM1024

(B) : GEM1011

(C) : GEM1048

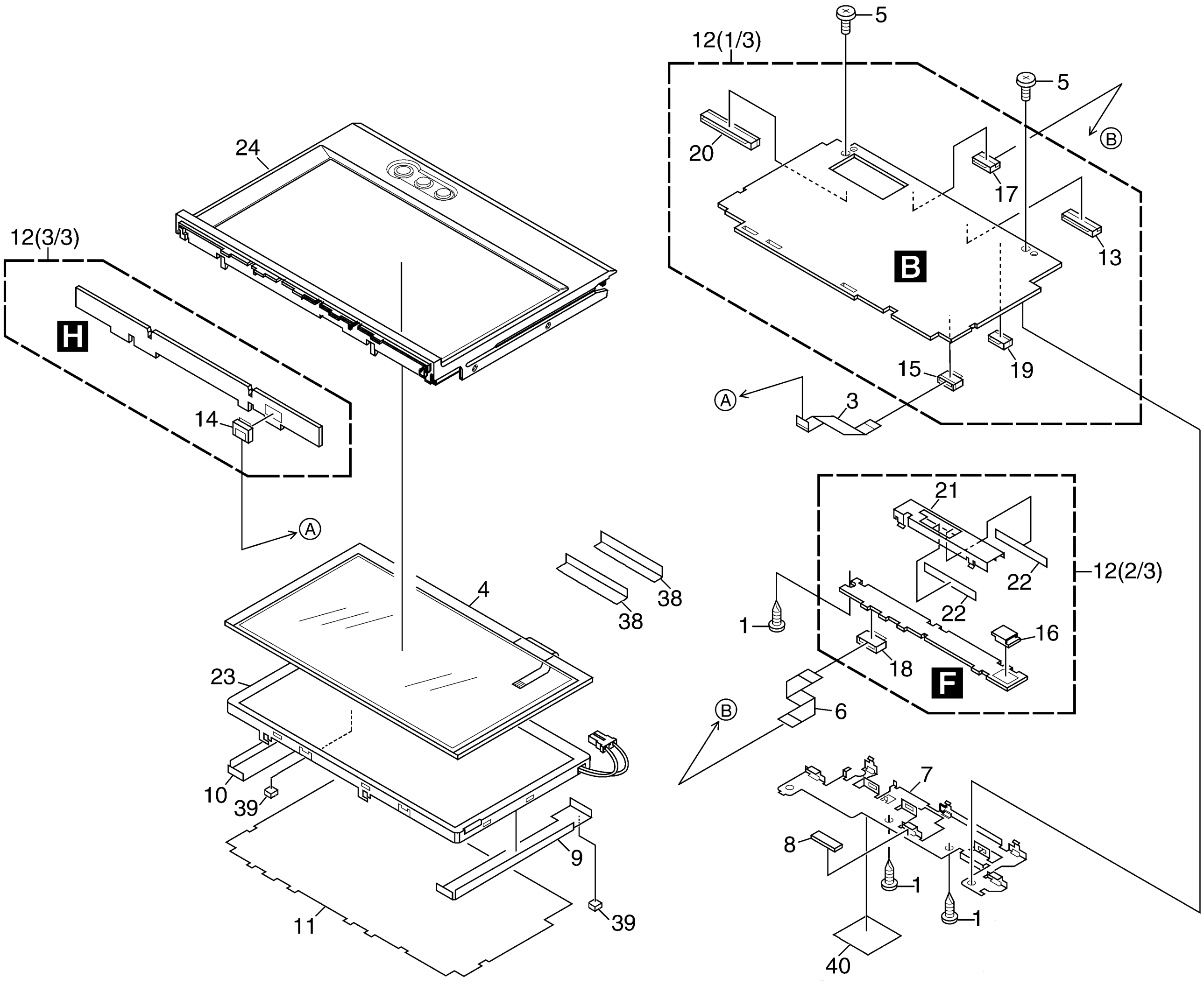
(D) : GEM1049

(E) : GEM1047

EXTERIOR(2) SECTION PARTS LIST

Mark	No.	Description	Part No.
	101	Screw(M2x3)	CBA1082
	102	Screw(M2x2.5)	CBA1250
	103	Screw(M2x4)	CBA1277
	104	Screw(M2x1.5)	CBA1615
	105	Washer	CBF1038
	106	Spring	CBH2645
	107	Spring	CBH2646
	108	Spring	CBH2647
	109	Spring	CBL1585
	110	Spring	CBL1586
	111	Spring	CBL1587
	112	Cord Assy	CDE7047
	113	Cord Assy	CDE7213
	114	Shaft	CLA4270
	115	Shaft	CLA4305
	116	Shaft	CLA4306
	117	Shaft	CLA4309
	118	Bracket	CND1221
	119	Heat Sink	CND1228
	120	Case	CND1229
	121	Holder	CND1318
	122	Holder	CND1449
	123	Sheet	CNM8522
	124	Sheet	CNM8037
	125	Insulator	CNM8048
	126	Insulator	CNM8158
	127	Sheet	CNM8159
	128	Tape	CNM8160
	129	Insulator	CNM8294
	130	Gear	CNR1664
	131	Gear	CNR1665
	132	Gear	CNR1677
	133	Gear	CNR1678
	134	Gear	CNR1679
	135	Gear	CNR1680
	136	Gear	CNR1688
	137	Gear	CNR1802
	138	Gear	CNR1708
	139	Gear	CNV7383
	140	Holder	CNV7384
	141	Holder	CNV7385
	142	Rack	CNV7386
	143	Rack	CNV7387
	144	Slider	CNV7388
	145	Slider	CNV7389
	146	Holder	CNV7390
	147	Arm	CNV7391
	148	Gear	CNV7522
	149	Gear	CNV7523
	150	Gear	CNR1709
	151	Gear	CNV7529
	152	Chassis Unit	CXB9509
	153	Frame Unit	CXB9511
	154	Holder Unit	CXB9512
	155	Shaft Unit	CXB9513
	156	Holder Unit	CXB9514
	157	Motor Unit(M3001)(Position)	CXB9515
	158	Motor Unit(M3002)(Angle)	CXB9516
	159	Screw	CZB3082
	160	Screw	CZB3083
	161	Washer	CZB3084
	162	Main Unit	CZW3087
	163	SW Unit	CZW3088
	164	Volume Unit	CZW3089
	165	Screw	IMS20P020FTC
	166	Screw	IMS20P030FZK
	167	Washer	YE15S
	168	Screw	BMZ26P050FTC
	169	Connector(CN3801)	CKS4068
	170	Connector(CN3802,CN3803)	CKS4732
	171	Connector(CN3807,3809)	CKS4733
	172	Spacer	CNM9837
	173	IC(IC3801)	BA00AST
	174	Volume(VR3841)	CCW1025
	175	•••••	
	176	Bracket Unit	CXC3048
	177	Screw(M2x2)	CBA1872
	178	Holder	CND2890
	179	Spring	CBH2750
	180	Cover Unit	CXC5118
	181	Screw(M2x2)	CBA1872
	182	Screw(M2x1.8)	CZB3085
	183	Spring	CBL1642
	184	Screw(M2x4)	CZB3088
	185	Drive Unit	CXC5111
	186	Washer	CZB3089
	187	Sheet	•••••
	188	Arm	CNV8065
	189	Holder	CNV8066
	190	Screw(M2x3)	CBA1876
	191	Spring	CBL1679
	192	Lever	CND2202
	193	Screw	CBA1797
	101	Screw(M2x3)	CBA1082

2.4 EXTERIOR(3)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12(1/3)
5
B
20
17
13
B
15
19
A
3
24
12(3/3)
H
14
A
21
22
12(2/3)
22
16
38
38
4
1
18
F
23
B
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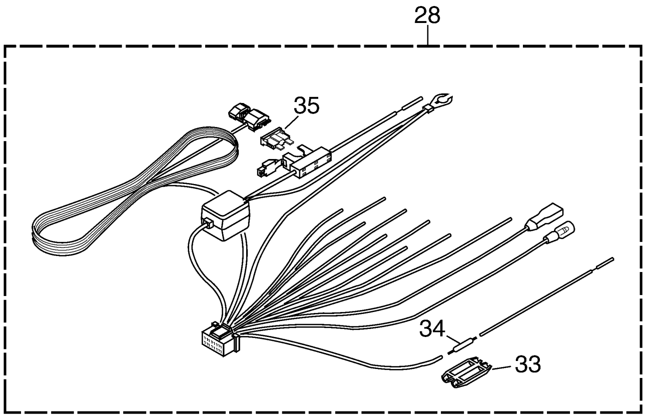
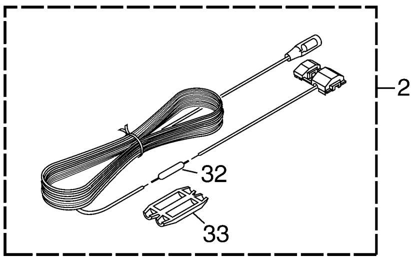
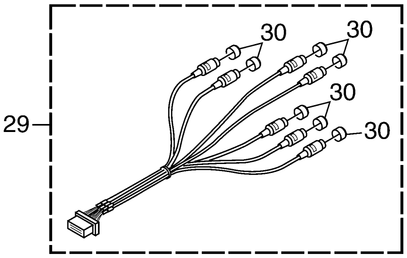
40



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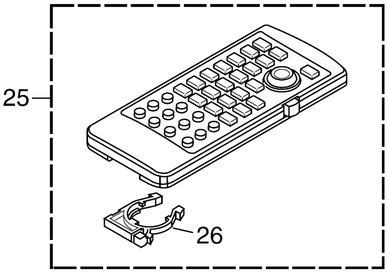
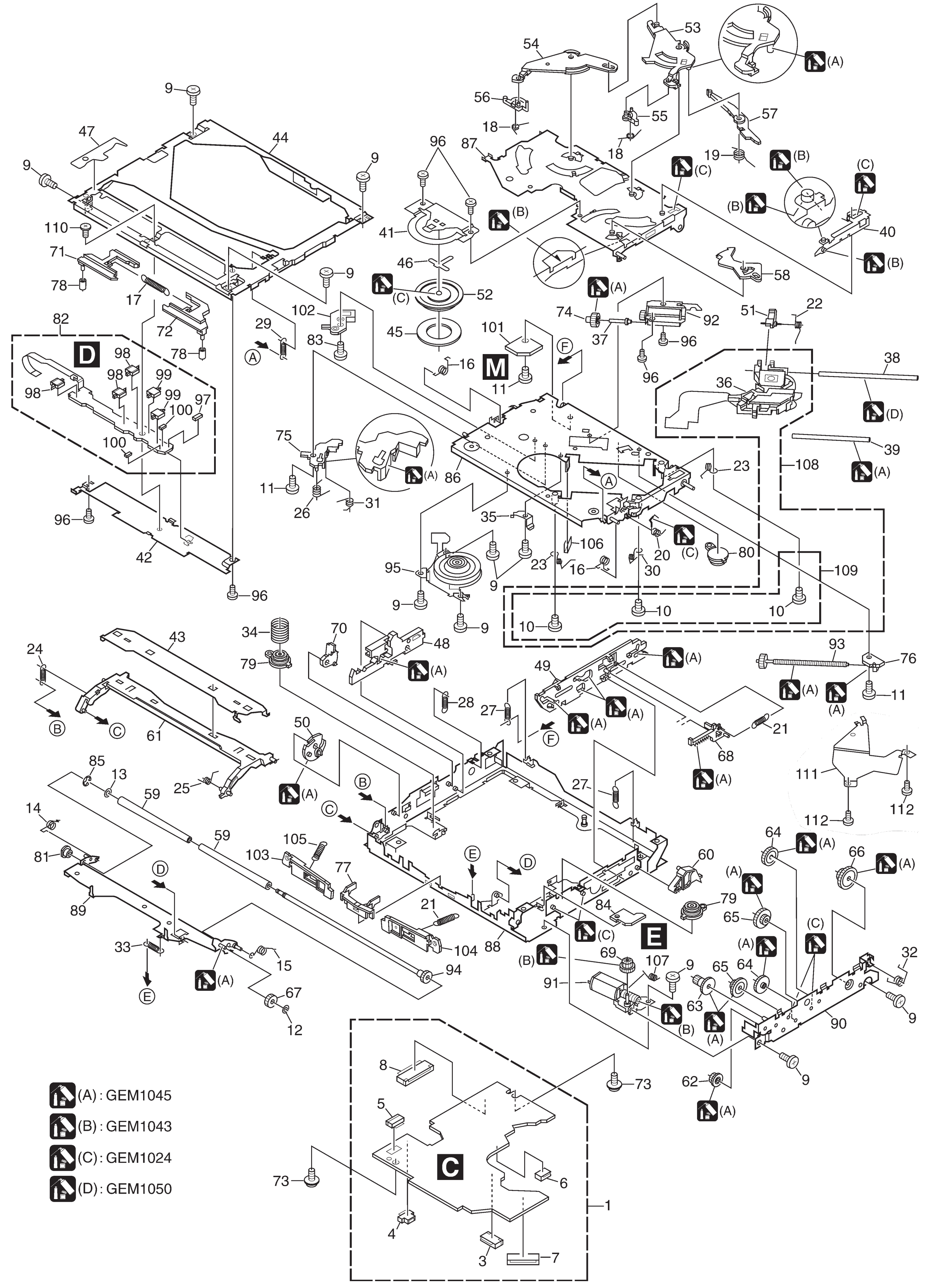


EXTERIOR(3) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BPZ20P060FTC
	2	•••••	
	3	FFC	CDE7195
	4	Touch Panel	CSX1087
	5	Screw(M2x2)	CBA1872
	6	FFC	CDE7814
	7	Holder	CND2610
	8	Gasket	CNM8600
	9	Sheet	CNM8265
	10	Sheet	CNM7784
	11	Insulator	CNM9390
	12	Monitor Unit	CWM9822
	13	Connector(CN4541)	CKS3968
	14	Connector(CN4301)	CKS4054
	15	Connector(CN4591)	CKS4054
	16	Connector(CN5342)	CKS4428
	17	Connector(CN4521)	CKS4595
	18	Connector(CN5001)	CKS4595
	19	Connector(CN4501)	CKS4675
	20	Connector(CN4007)	CKS4872
	21	Shield	CND2737
	22	Insulator	CNM9251
	23	LCD Module	CWX3151
	24	Grille Unit	CXC4199
	25	Remote Control Unit	CXC3075
	26	Cover	CZN5357
	27	Cord Assy	CDE7321
	28	Cord Assy	CDE7790
	29	Cord Assy	CDE7801
	30	Cap	CNV6727
	31	•••••	
	32	Resistor	RSV2PMF102J
	33	Cap	CNS1472
	34	Resistor	RS1/2PMF102J
⚠	35	Fuse(10A)	CEK1136
	36	•••••	
	37	•••••	
	38	Sheet	CNM9742
	39	Spacer	CNM9840
	40	Sheet	CNM9744

2.5 DVD MECHANISM MODULE(MS3-V1)



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54
(A)
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18
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9
47
44
9
9
96
87
(C)
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(B)
40
110
41
71
46
(B)
78
9
58
17
(C)
52
(A)
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102
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101
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D
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99
A
16
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M
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36
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99
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100
97
(D)
75
100
39
23
108
(A)
(A)
11
86
A
(A)
26
31
C
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35
106
(C)
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(A)
(A)
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(A)
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(A)
D
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(C)
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(A)
(C)
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104
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69
(B)
107
32
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91
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65
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(A)
94
E
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67
(B)
(A)
90
9
12
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9
73
62
(A)
5
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73
6
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7

(A) : GEM1045

(B) : GEM1043

(C) : GEM1024

(D) : GEM1050

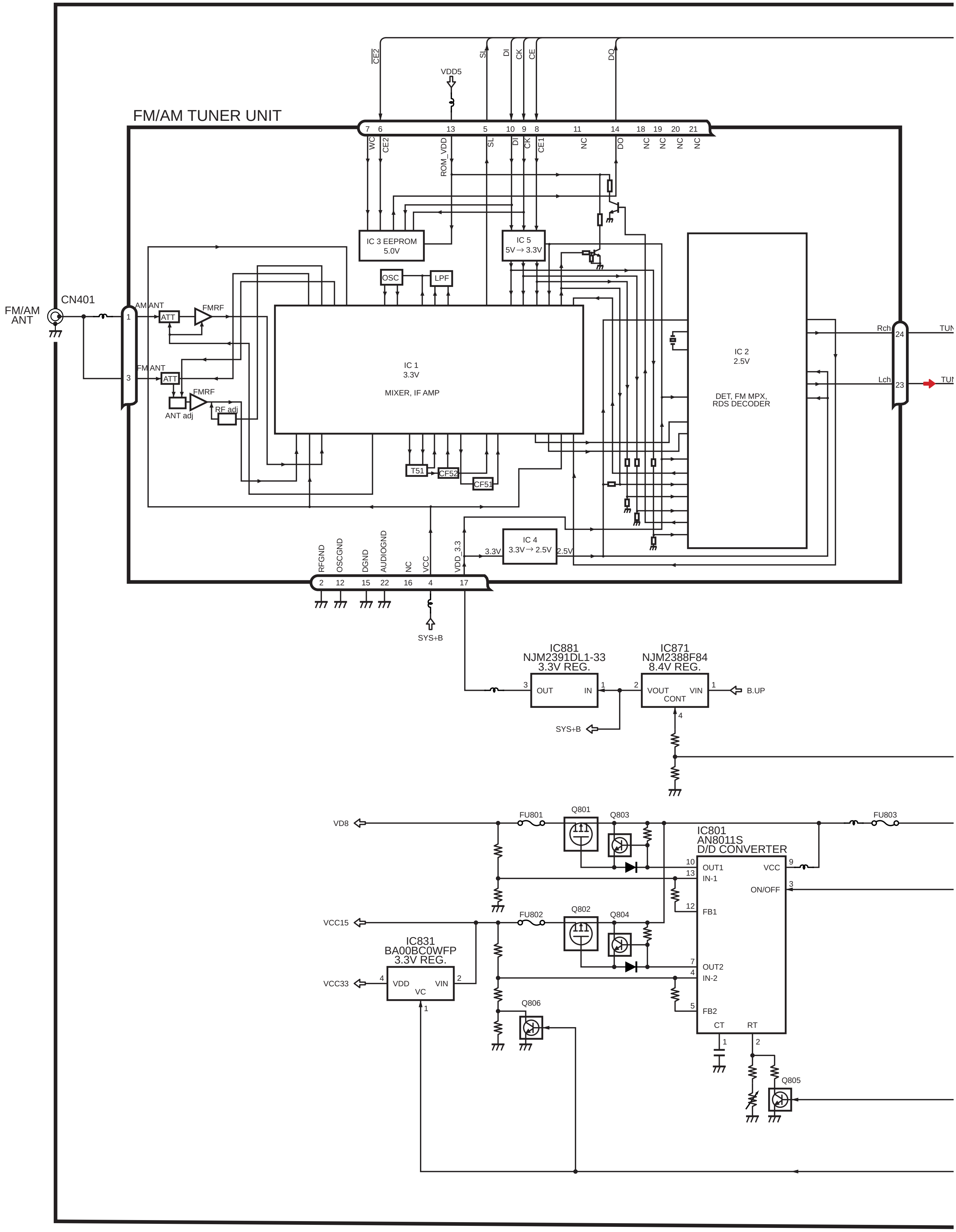
DVD MECHANISM MODULE (MS3-V1)SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	DVD Core Unit	CWX3170
	2	•••••	
	3	Connector(CN1201)	CKS4067
	4	Connector(CN1551)	CKS4817
	5	Connector(CN1231)	CKS4624
	6	Connector(CN1903)	CKS4374
	7	Connector(CN1101)	CKS4625
	8	Connector(CN1901)	CKS3971
	9	Screw	BMZ20P020FTC
	10	Screw(M2 x 3.5)	CBA1571
	11	Screw(M2 x 2.5)	CBA1623
	12	Washer	CBF1038
	13	Washer	CBF1064
	14	Spring	CBH2586
	15	Spring	CBH2587
	16	Spring	CBH2588
	17	Spring	CBH2589
	18	Spring	CBH2590
	19	Spring	CBH2591
	20	Spring	CBH2592
	21	Spring	CBH2593
	22	Spring	CBH2594
	23	Spring	CBH2595
	24	Spring	CBH2596
	25	Spring	CBH2597
	26	Spring	CBH2598
	27	Spring	CBH2599
	28	Spring	CBH2600
	29	Spring	CBH2601
	30	Spring	CBH2602
	31	Spring	CBH2603
	32	Spring	CBH2604
	33	Spring	CBH2605
	34	Spring	CBH2711
	35	Spring	CBL1564
	36	Pickup Unit(Service)	CXX1770
	37	Shaft	CLA3881
	38	Shaft	CLA4206
	39	Shaft	CLA4207
	40	Lever	CNC9933
	41	Holder	CNC9939
	42	Holder	CND2251
	43	Holder	CNC9941
	44	Frame	CND2250
	45	Sheet	CNM6883
	46	Sheet	CNM8283
	47	Sheet	CNM8643
	48	Lever	CNV8076
	49	Lever	CNV7155
	50	Cam	CNV7156
	51	Rack	CNV7157
	52	Clamper	CNV7158
	53	Arm	CNV7159
	54	Arm	CNV7160
	55	Arm	CNV7161
	56	Arm	CNV7162
*	57	Arm	CNV7163
	58	Arm	CNV7164
	59	Roller	CNV7165
	60	Arm	CNV7166
	61	Guide	CNV8093
	62	Gear	CNV7169
	63	Gear	CNV7170
	64	Gear	CNV7171
	65	Gear(Black)	CNV7172
	66	Gear	CNV7173
	67	Gear	CNV7174
	68	Rack	CNV7175
	69	Gear	CNV7176
	70	Arm	CNV8077
	71	Lever	CNV7178
	72	Lever	CNV7179
	73	Screw	IMS20P030FTC
	74	Gear	CNV7181
	75	Holder	CNV7183
	76	Holder	CNV7184
	77	Guide	CNV7745
	78	Roller	CNV7344
	79	Damper	CNV7470
	80	Damper	CNV7471
	81	Collar	CNV7645
	82	Compound Unit(A)	CWX3154
	83	Screw(M2x2)	CBA1817
	84	Compound Unit(B)	CWX3156
	85	Washer	YE20FTC
	86	Chassis Unit	CXC3629
	87	Arm Unit	CXB8681
	88	Frame Unit	CXB8683
	89	Arm Unit	CXC4701
	90	Bracket Unit	CXB8685
	91	Motor Unit(LOADING)(M1)	CXC4659
	92	Motor Unit(CARRIAGE)(M2)	CXC4314
	93	Screw Unit	CXB8689
	94	Roller Unit	CXB8690
	95	Motor(SPINDLE)(M3)	CXM1272
	96	Screw	JFZ20P018FTC
	97	Photo-transistor(Q1299)	CPT231SCTD
	98	Switch(S1201,S1202,S1203)	CSN1069
	99	Spring Switch(S1204,S1205)	CSN1070
	100	Resistor(R1298,R1299)	RS1/16S0R0J
	101	Gathering PCB	CNX4320
	102	Holder	CNV8186
	103	Arm	CNV7742
	104	Arm	CNV7743
	105	Spring	CBH2710
	106	Spring	CBL1643
	107	Spring	CBH2712
	108	Pickup Unit(Service)(Screw)	GXX1242
	109	Screw Assy	CXX1750
	110	Screw(M1.4xM1.4)	CBA1787
	111	Cover	CNC9943
	112	Screw	JFZ20P018FTC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

3.1 BLOCK DIAGRAM

A MOTHER UNIT (1/2)


CE2
SL
DI
CK
CE
DO
VDD5
FM/AM TUNER UNIT
7 6 13 5 10 9 8 11 14 18 19 20 21
WC
CE2
ROM_VDD
SL
DI
CK
CE1
NC
DO
NC
NC
NC
NC
IC 3 EEPROM
5.0V
IC 5
5V → 3.3V
OSC
LPF
FM/AM
ANT
CN401
AM ANT
FMRF
ATT
1
3
FM ANT
ATT
FMRF
ANT adj
RF adj
IC 1
3.3V
MIXER, IF AMP
IC 2
2.5V
DET, FM MPX,
RDS DECODER
Rch
24
TUN
Lch
23
TUN
T51
CF52
CF51
IC 4
3.3V → 2.5V
3.3V
2.5V
RFGND
OSCGND
DGND
AUDIOGND
NC
VCC
VDD_3.3
2 12 15 22 16 4 17
SYS+B
IC881
NJM2391DL1-33
3.3V REG.
3
OUT
IN
1
IC871
NJM2388F84
8.4V REG.
2
VOUT
VIN
CONT
1
4
B.UP
SYS+B
VD8
FU801
Q801
Q803
FU803
IC801
AN8011S
D/D CONVERTER
10
OUT1
13
IN-1
VCC
9
ON/OFF
3
12
FB1
VCC15
FU802
Q802
Q804
IC831
BA00BC0WFP
3.3V REG.
VCC33
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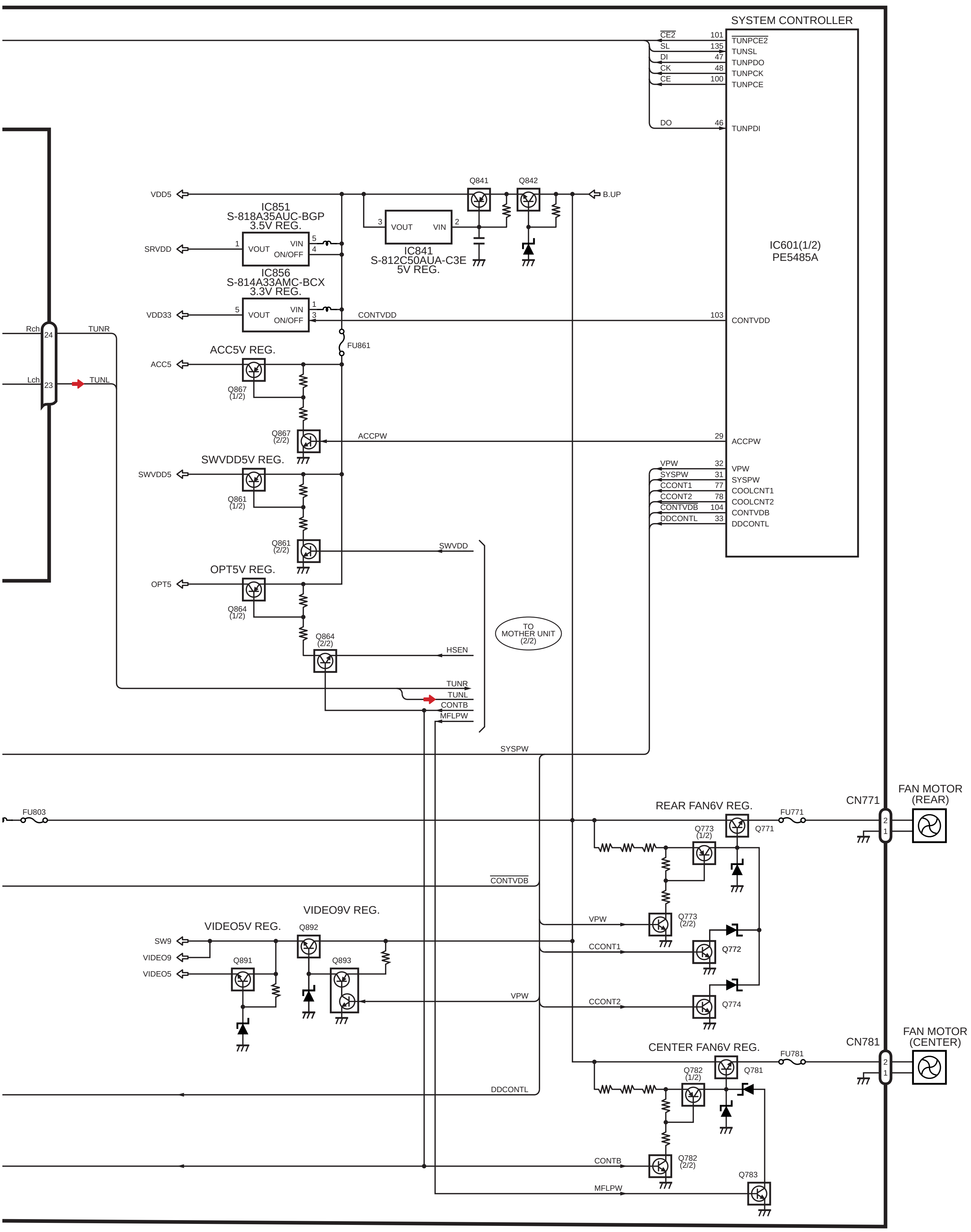
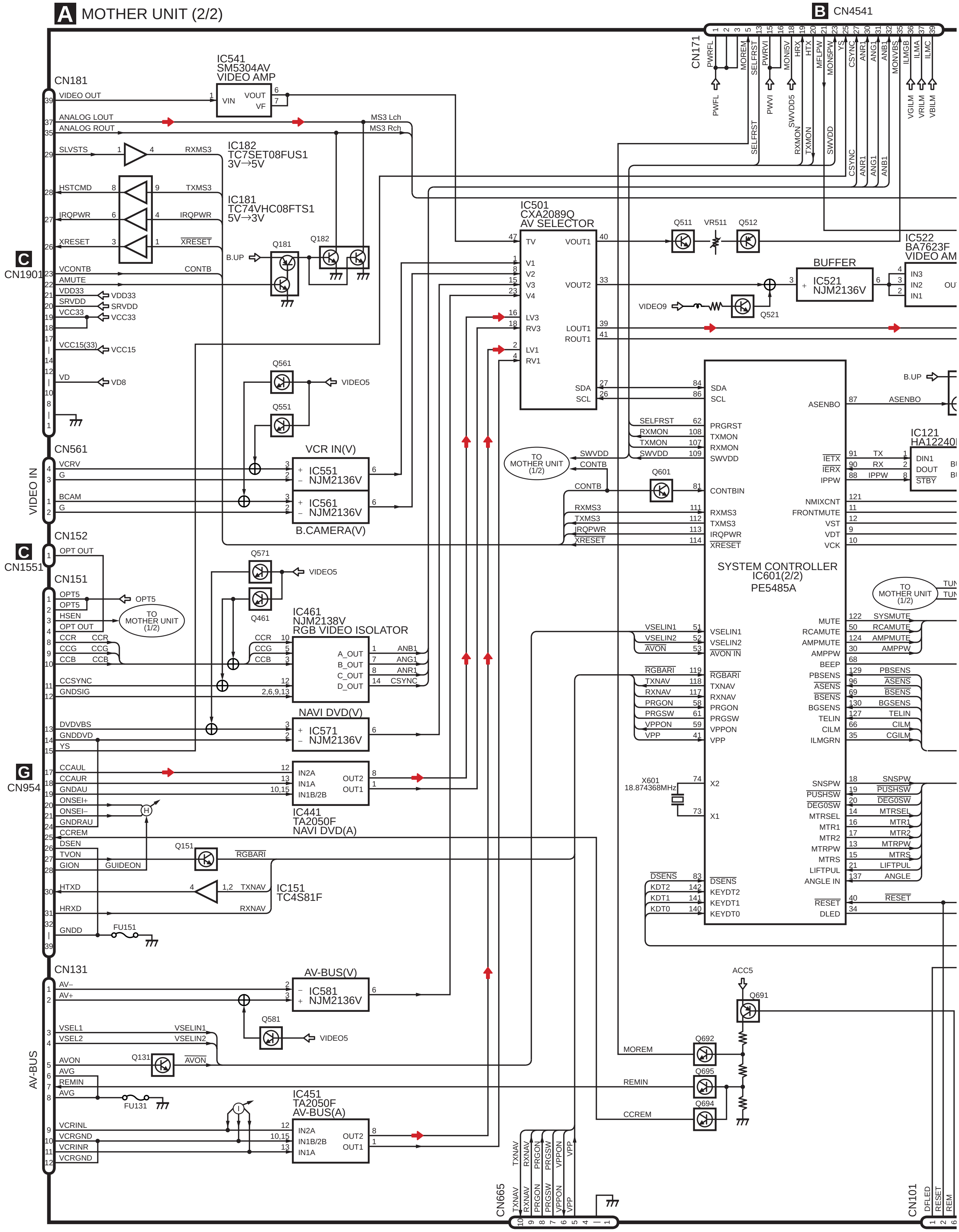
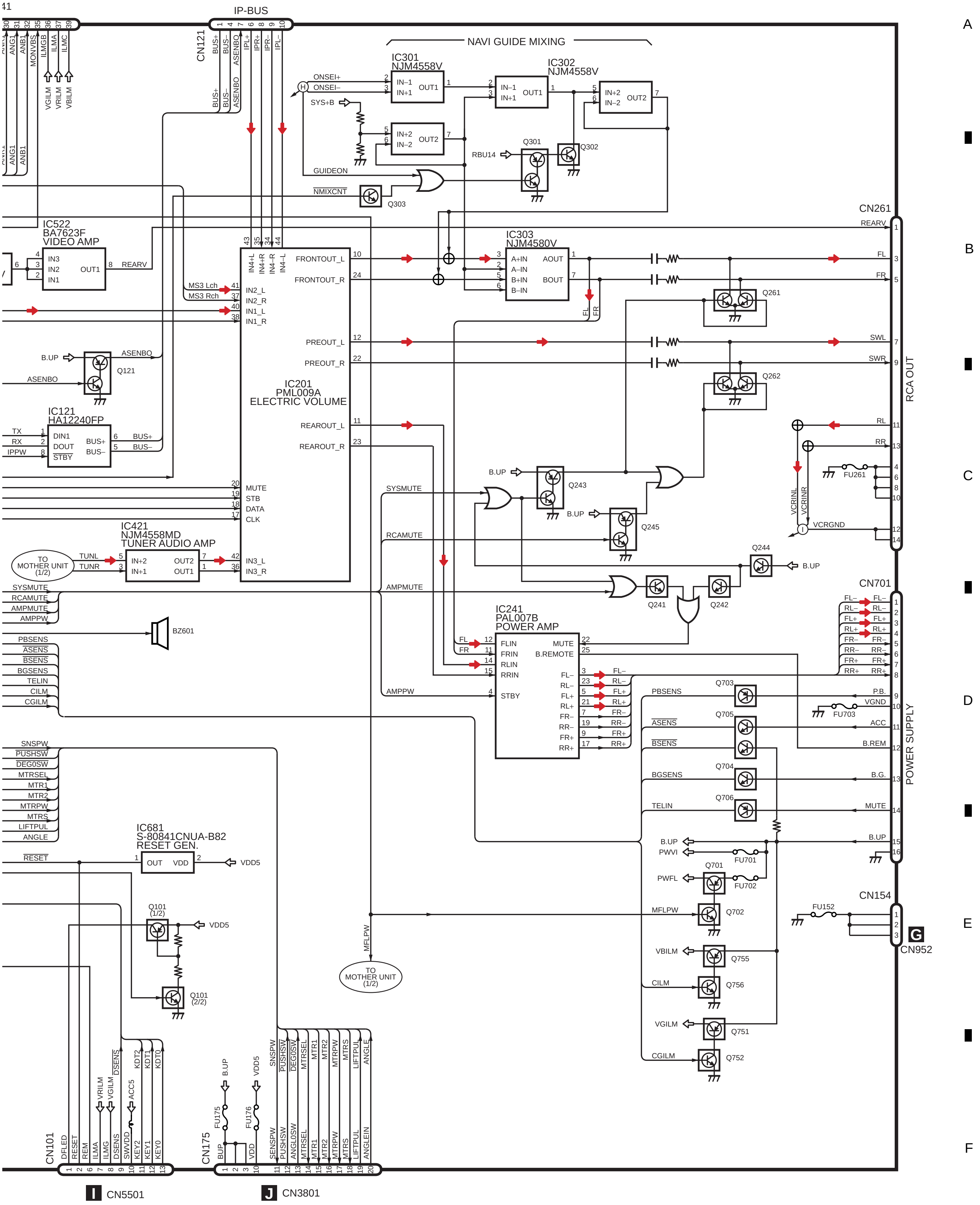
VDD
VIN
2
VC
1
7
OUT2
4
IN-2
5
FB2
CT
RT
1
2
Q806
Q805


A
B
C
D
E
F
SYSTEM CONTROLLER
CE2 101 TUNPCE2
SL 135 TUNSL
DI 47 TUNPDO
CK 48 TUNPCK
CE 100 TUNPCE
DO 46 TUNPDI
IC601(1/2)
PE5485A
103 CONTVDD
29 ACCPW
VPW 32 VPW
SYSPW 31 SYSPW
CCONT1 77 COOLCNT1
CCONT2 78 COOLCNT2
CONTVDB 104 CONTVDB
DDCONTL 33 DDCONTL
Q841
Q842
B.UP
VDD5
IC851
S-818A35AUC-BGP
3.5V REG.
VOUT
VIN
ON/OFF
SRVDD
IC841
S-812C50AUA-C3E
5V REG.
IC856
S-814A33AMC-BCX
3.3V REG.
VDD33
CONTVDD
Rch 24 TUNR
Lch 23 TUNL
FU861
ACC5V REG.
ACC5
Q867 (1/2)
Q867 (2/2)
ACCPW
SWVDD5V REG.
SWVDD5
Q861 (1/2)
Q861 (2/2)
SWVDD
OPT5V REG.
OPT5
Q864 (1/2)
Q864 (2/2)
HSEN
TO MOTHER UNIT (2/2)
TUNR
TUNL
CONTB
MFLPW
SYSPW
FU803
REAR FAN6V REG.
FU771
Q771
Q773 (1/2)
Q773 (2/2)
CN771
FAN MOTOR (REAR)
CONTVDB
VPW
CCONT1
Q772
CCONT2
Q774
VIDEO9V REG.
VIDEO5V REG.
Q892
Q891
Q893
SW9
VIDEO9
VIDEO5
VPW
CENTER FAN6V REG.
FU781
Q781
Q782 (1/2)
Q782 (2/2)
CN781
FAN MOTOR (CENTER)
DDCONTL
CONTB
Q783
MFLPW

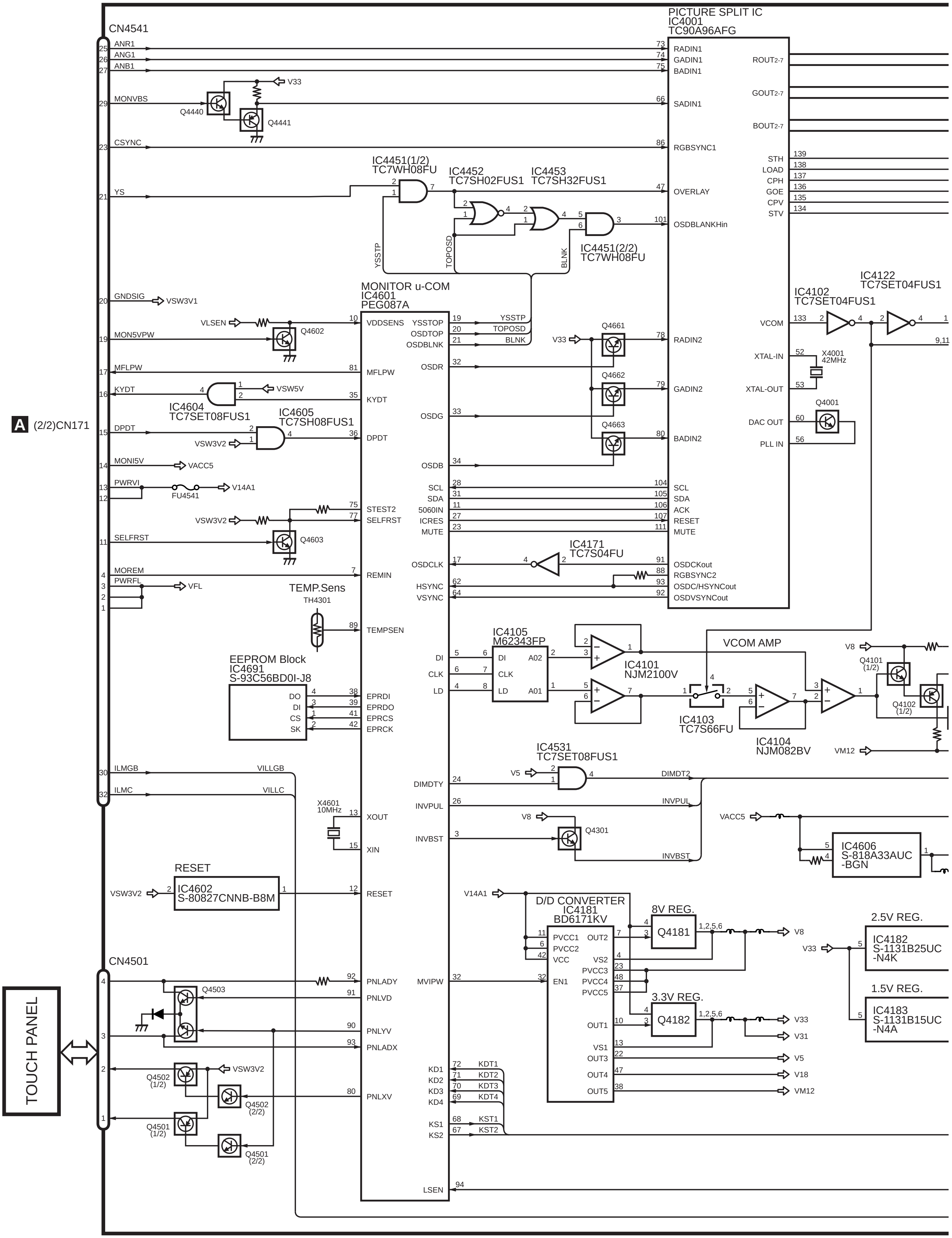
A MOTHER UNIT (2/2)

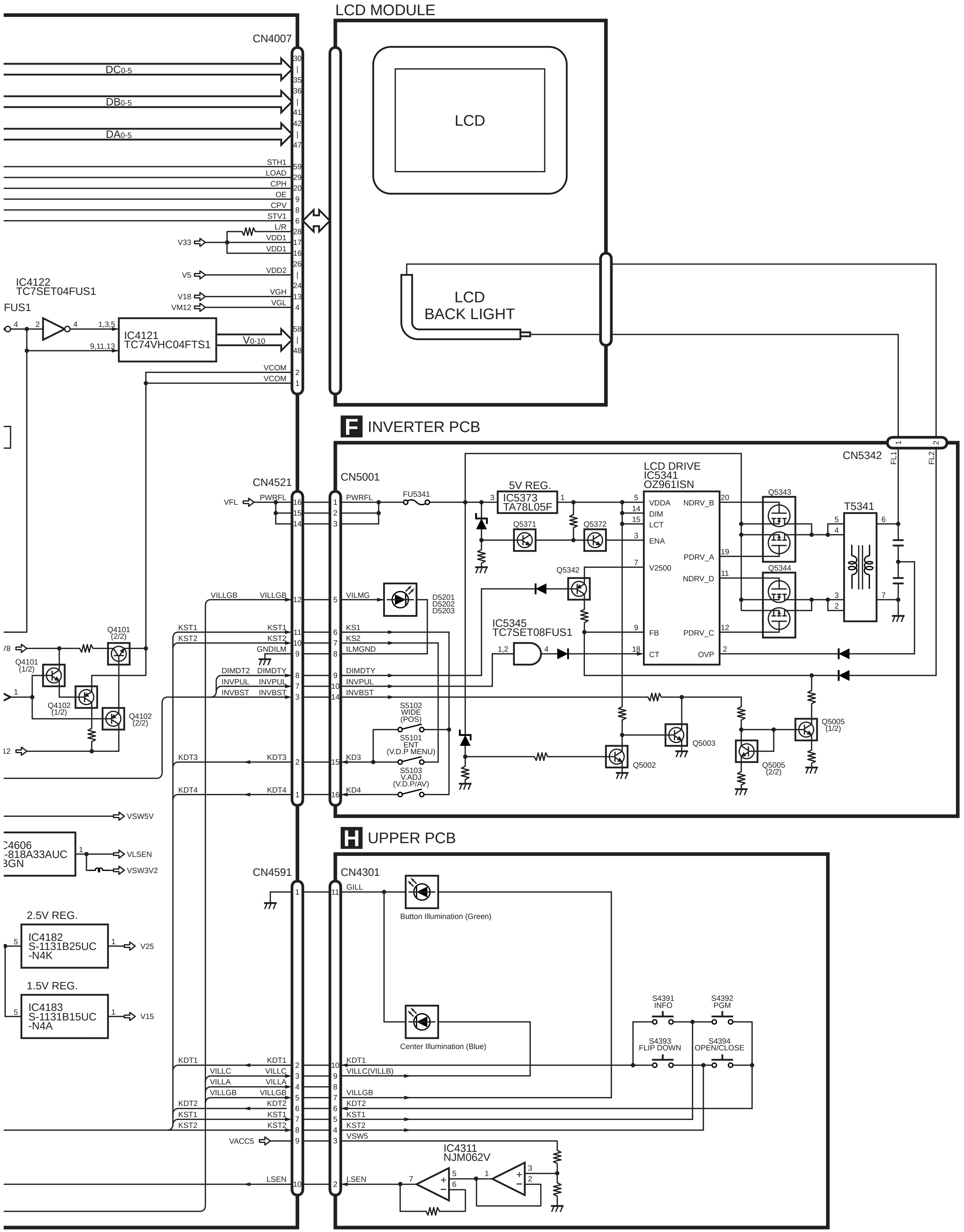

A
B
C
G
CN4541
CN171
CN181
CN1901
CN561
CN152
CN1551
CN151
CN954
CN131
CN665
CN101
VIDEO IN
AV-BUS
IC541
SM5304AV
VIDEO AMP
VIN
VOUT
VF
IC182
TC7SET08FUS1
3V→5V
IC181
TC74VHC08FTS1
5V→3V
IC501
CXA2089Q
AV SELECTOR
TV
V1
V2
V3
V4
LV3
RV3
LV1
RV1
VOUT1
VOUT2
LOUT1
ROUT1
SDA
SCL
Q181
Q182
B.UP
Q511
VR511
Q512
IC522
BA7623F
VIDEO AM
IN3
IN2
IN1
BUFFER
IC521
NJM2136V
VIDEO9
Q521
Q561
Q551
VIDEO5
VCR IN(V)
IC551
NJM2136V
IC561
NJM2136V
B.CAMERA(V)
Q571
Q461
IC461
NJM2138V
RGB VIDEO ISOLATOR
A_OUT
B_OUT
C_OUT
D_OUT
NAVI DVD(V)
IC571
NJM2136V
IC441
TA2050F
NAVI DVD(A)
IN2A
IN1A
IN1B/2B
OUT2
OUT1
Q151
IC151
TC4S81F
FU151
AV-BUS(V)
IC581
NJM2136V
Q581
Q131
FU131
IC451
TA2050F
AV-BUS(A)
SYSTEM CONTROLLER
IC601(2/2)
PE5485A
X601
18.874368MHz
X2
X1
IC121
HA12240
DIN1
DOUT
STBY
TO MOTHER UNIT (1/2)
Q601
ACC5
Q691
Q692
Q695
Q694
MOREM
REMIN
CCREM
VIDEO OUT
ANALOG LOUT
ANALOG ROUT
SLVSTS
HSTCMD
IRQPWR
XRESET
VCONTB
AMUTE
VDD33
SRVDD
VCC33
VCC15(33)
VCC15
VD
VD8
MS3 Lch
MS3 Rch
RXMS3
TXMS3
CONTB
VCRV
G
BCAM
OPT OUT
OPT5
HSEN
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI–
GNDRAU
CCREM
DSEN
TVON
GION
GUIDEON
RGBARI
HTXD
TXNAV
HRXD
RXNAV
GNDD
AV–
AV+
VSEL1
VSEL2
VSELIN1
VSELIN2
AVON
AVG
VCRINL
VCRGND
VCRINR
ANB1
ANG1
ANR1
CSYNC
PWFL
MOREM
SELFRST
PWRVI
MONI5V
HRX
HTX
MFLPW
MONSPW
YS
ANR1
ANG1
ANB1
MONVBS
ILMGB
ILMA
ILMC
PWFL
PWVI
SWVDD5
SELFRST
RXMON
TXMON
SWVDD
VGILM
VRILM
VBILM
PRGRST
SWVDD
CONTBIN
IRQPWR
ASENBO
IETX
IERX
IPPW
TX
RX
NMIXCNT
FRONTMUTE
VST
VDT
VCK
MUTE
RCAMUTE
AMPMUTE
AMPPW
BEEP
SYSMUTE
PBSENS
ASENS
BSENS
BGSENS
TELIN
CILM
ILMGRN
CGILM
AVON IN
RGBARI
TXNAV
RXNAV
PRGON
PRGSW
VPPON
VPP
SNSPW
PUSHSW
DEG0SW
MTRSEL
MTR1
MTR2
MTRPW
MTRS
LIFTPUL
ANGLE IN
ANGLE
DSENS
KEYDT2
KEYDT1
KEYDT0
KDT2
KDT1
KDT0
RESET
DLED
DFLED
REM

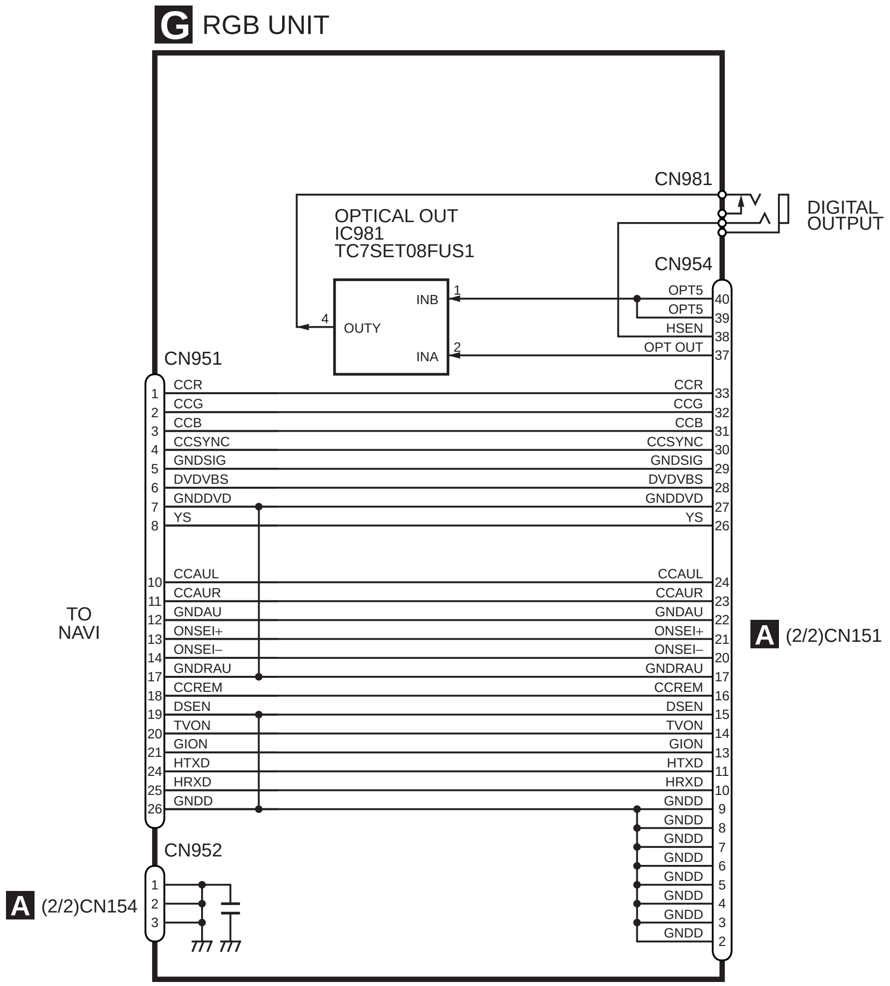


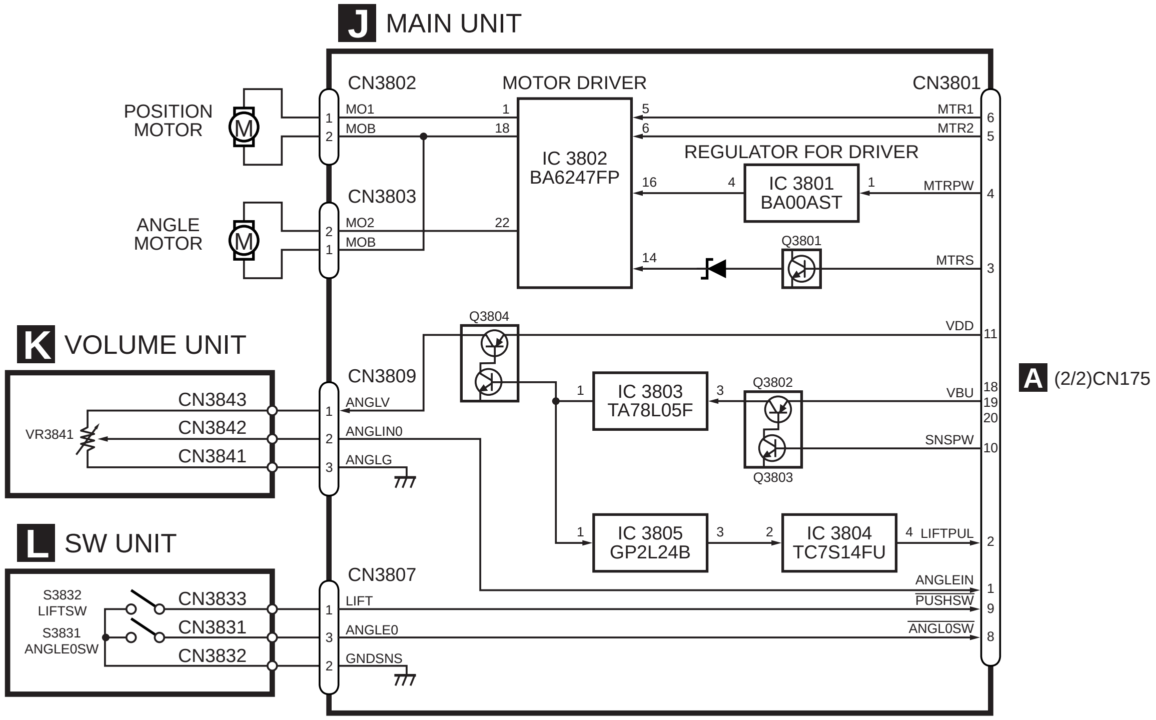
IP-BUS
CN121
BUS+
BUS–
ASENBO
IPL+
IPR+
IPR–
IPL–
NAVI GUIDE MIXING
IC301
NJM4558V
IC302
NJM4558V
ONSEI+
ONSEI–
SYS+B
IN–1
IN+1
OUT1
IN+2
IN–2
OUT2
GUIDEON
NMIXCNT
Q303
Q301
Q302
RBU14
VGILM
VRILM
VBILM
ILMGB
ILMA
ILMC
ANG1
ANB1
MONVBS
IC522
BA7623F
VIDEO AMP
IN3
IN2
IN1
OUT1
REARV
MS3 Lch
MS3 Rch
IN4+L
IN4+R
IN4–R
IN4–L
IN2_L
IN2_R
IN1_L
IN1_R
FRONTOUT_L
FRONTOUT_R
PREOUT_L
PREOUT_R
REAROUT_L
REAROUT_R
IC201
PML009A
ELECTRIC VOLUME
MUTE
STB
DATA
CLK
IN3_L
IN3_R
IC303
NJM4580V
A+IN
A–IN
B+IN
B–IN
AOUT
BOUT
CN261
RCA OUT
REARV
FL
FR
SWL
SWR
RL
RR
Q261
Q262
FU261
VCRINL
VCRINR
VCRGND
B.UP
ASENBO
Q121
IC121
HA12240FP
TX
RX
IPPW
DIN1
DOUT
STBY
BUS+
BUS–
Q243
Q245
Q244
Q241
Q242
SYSMUTE
RCAMUTE
AMPMUTE
AMPPW
IC421
NJM4558MD
TUNER AUDIO AMP
TO MOTHER UNIT (1/2)
TUNL
TUNR
BZ601
IC241
PAL007B
POWER AMP
FLIN
FRIN
RLIN
RRIN
STBY
MUTE
B.REMOTE
FL–
RL–
FL+
RL+
FR–
RR–
FR+
RR+
CN701
POWER SUPPLY
PBSENS
ASENS
BSENS
BGSENS
TELIN
CILM
CGILM
Q703
Q705
Q704
Q706
P.B.
VGND
FU703
ACC
B.REM
B.G.
MUTE
B.UP
PWVI
FU701
PWFL
FU702
Q701
MFLPW
Q702
VBILM
Q755
Q756
VGILM
Q751
Q752
CN154
FU152
CN952
G
SNSPW
PUSHSW
DEG0SW
MTRSEL
MTR1
MTR2
MTRPW
MTRS
LIFTPUL
ANGLE
IC681
S-80841CNUA-B82
RESET GEN.
RESET
OUT
VDD
VDD5
Q101 (1/2)
Q101 (2/2)
CN101
DFLED
RESET
REM
ILMA
ILMG
DSENS
SWVDD
KEY2
KEY1
KEY0
VRILM
VGILM
ACC5
KDT2
KDT1
KDT0
CN175
BUP
VDD
FU175
FU176
SENSPW
PUSHSW
ANGL0SW
MTRSEL
MTR1
MTR2
MTRPW
MTRS
LIFTPUL
ANGLEIN
I
CN5501
J
CN3801

B MONITOR PCB

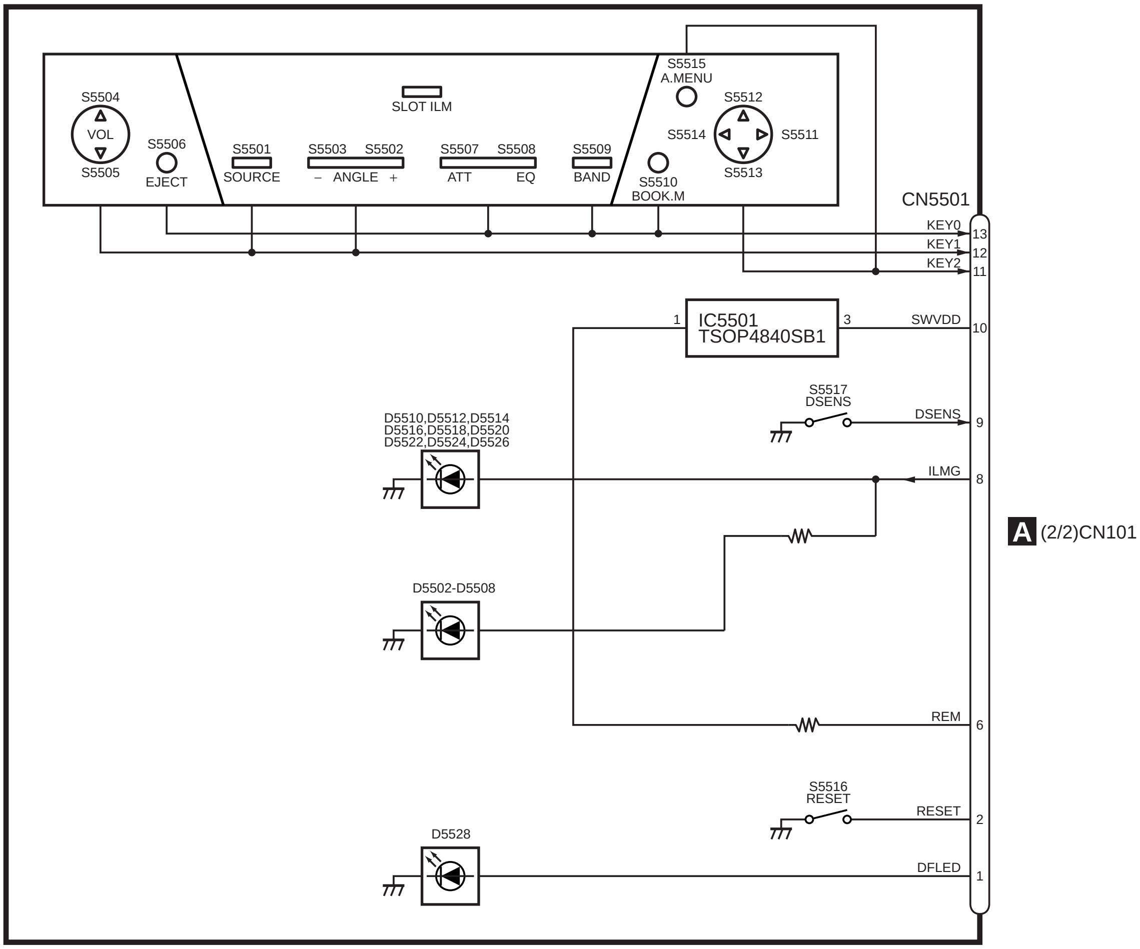

CN4541
ANR1
ANG1
ANB1
MONVBS
CSYNC
YS
GNDSIG
MON5VPW
MFLPW
KYDT
DPDT
MONI5V
PWRVI
SELFRST
MOREM
PWRFL
ILMGB
ILMC
A (2/2)CN171
V33
Q4440
Q4441
VSW3V1
VLSEN
Q4602
VSW5V
IC4604
TC7SET08FUS1
IC4605
TC7SH08FUS1
VSW3V2
VACC5
FU4541
V14A1
Q4603
VFL
TEMP.Sens
TH4301
EEPROM Block
IC4691
S-93C56BD0I-J8
DO
DI
CS
SK
VILLGB
VILLC
X4601
10MHz
RESET
IC4602
S-80827CNNB-B8M
CN4501
Q4503
Q4502 (1/2)
Q4502 (2/2)
Q4501 (1/2)
Q4501 (2/2)
TOUCH PANEL
IC4451(1/2)
TC7WH08FU
IC4452
TC7SH02FUS1
IC4453
TC7SH32FUS1
IC4451(2/2)
TC7WH08FU
YSSTP
TOPOSD
BLNK
MONITOR u-COM
IC4601
PEG087A
VDDSENS
YSSTOP
OSDTOP
OSDBLNK
OSDR
OSDG
OSDB
DPDT
STEST2
SELFRST
SCL
SDA
5060IN
ICRES
MUTE
OSDCLK
REMIN
HSYNC
VSYNC
TEMPSEN
DI
CLK
LD
EPRDI
EPRDO
EPRCS
EPRCK
DIMDTY
INVPUL
INVBST
XOUT
XIN
RESET
PNLADY
PNLVD
PNLYV
PNLADX
PNLXV
MVIPW
KD1
KD2
KD3
KD4
KS1
KS2
LSEN
KDT1
KDT2
KDT3
KDT4
KST1
KST2
PICTURE SPLIT IC
IC4001
TC90A96AFG
RADIN1
GADIN1
BADIN1
SADIN1
RGBSYNC1
OVERLAY
OSDBLANKHin
RADIN2
GADIN2
BADIN2
SCL
SDA
ACK
RESET
MUTE
OSDCKout
RGBSYNC2
OSDC/HSYNCout
OSDVSYNCout
ROUT2-7
GOUT2-7
BOUT2-7
STH
LOAD
CPH
GOE
CPV
STV
VCOM
XTAL-IN
XTAL-OUT
DAC OUT
PLL IN
X4001
42MHz
Q4001
Q4661
Q4662
Q4663
IC4171
TC7S04FU
IC4102
TC7SET04FUS1
IC4122
TC7SET04FUS1
9,11
IC4105
M62343FP
A02
A01
IC4101
NJM2100V
VCOM AMP
IC4103
TC7S66FU
IC4104
NJM082BV
V8
Q4101 (1/2)
Q4102 (1/2)
VM12
IC4531
TC7SET08FUS1
V5
DIMDT2
INVPUL
INVBST
Q4301
VACC5
IC4606
S-818A33AUC
-BGN
D/D CONVERTER
IC4181
BD6171KV
PVCC1
PVCC2
VCC
EN1
OUT2
VS2
PVCC3
PVCC4
PVCC5
OUT1
VS1
OUT3
OUT4
OUT5
8V REG.
Q4181
3.3V REG.
Q4182
1,2,5,6
V8
V33
V31
V5
V18
VM12
2.5V REG.
IC4182
S-1131B25UC
-N4K
1.5V REG.
IC4183
S-1131B15UC
-N4A

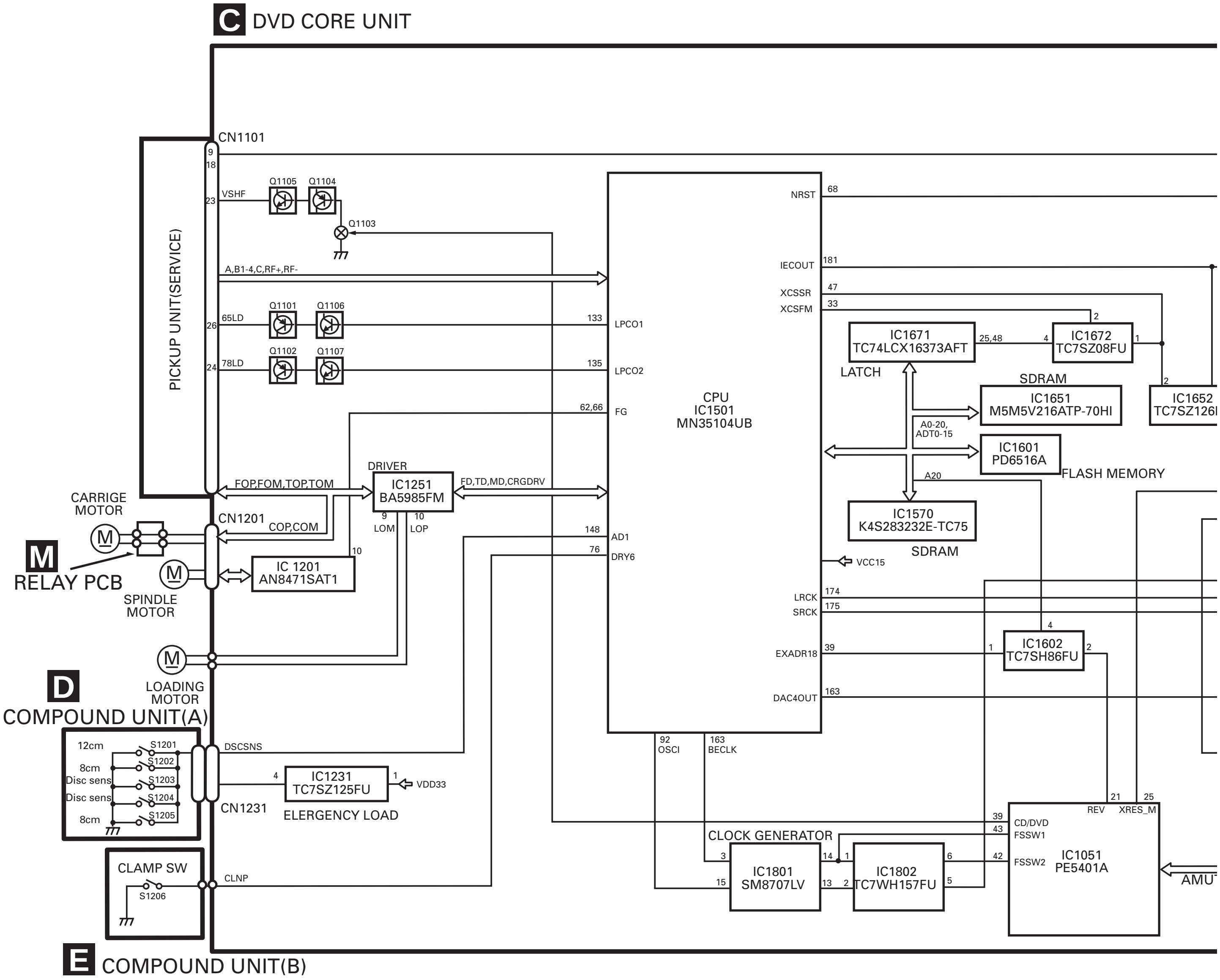

LCD MODULE
LCD
LCD BACK LIGHT
CN4007
DC0-5
DB0-5
DA0-5
STH1
LOAD
CPH
OE
CPV
STV1
L/R
VDD1
VDD1
VDD2
VGH
VGL
V33
V5
V18
VM12
VCOM
VCOM
IC4122
TC7SET04FUS1
FUS1
IC4121
TC74VHC04FTS1
V0-10
F INVERTER PCB
CN4521
CN5001
CN5342
FL1
FL2
VFL
PWRFL
FU5341
5V REG.
IC5373
TA78L05F
Q5371
Q5372
LCD DRIVE
IC5341
OZ961ISN
VDDA
DIM
LCT
ENA
V2500
FB
CT
NDRV_B
PDRV_A
NDRV_D
PDRV_C
OVP
Q5343
Q5344
T5341
Q5342
IC5345
TC7SET08FUS1
VILLGB
VILMG
D5201
D5202
D5203
KST1
KST2
KS1
KS2
GNDILM
ILMGND
DIMDT2
DIMDTY
INVPUL
INVBST
Q4101 (2/2)
Q4101 (1/2)
Q4102 (1/2)
Q4102 (2/2)
S5102 WIDE (POS)
S5101 ENT (V.D.P MENU)
S5103 V.ADJ (V.D.P/AV)
KDT3
KD3
KDT4
KD4
Q5002
Q5003
Q5005 (1/2)
Q5005 (2/2)
VSW5V
IC4606
-818A33AUC
3GN
VLSEN
VSW3V2
H UPPER PCB
CN4591
CN4301
GILL
Button Illumination (Green)
Center Illumination (Blue)
2.5V REG.
IC4182
S-1131B25UC
-N4K
V25
1.5V REG.
IC4183
S-1131B15UC
-N4A
V15
S4391 INFO
S4392 PGM
S4393 FLIP DOWN
S4394 OPEN/CLOSE
KDT1
VILLC
VILLC(VILLB)
VILLA
KDT2
VSW5
VACC5
IC4311
NJM062V
LSEN

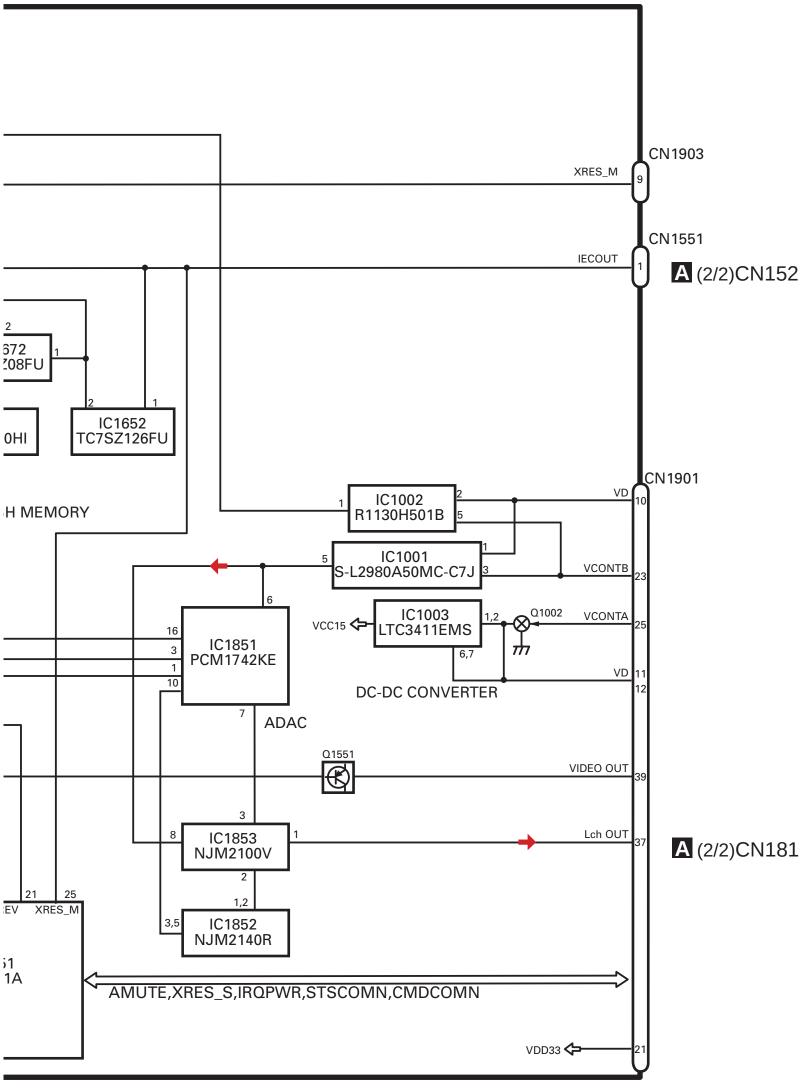

G RGB UNIT
CN981
DIGITAL OUTPUT
OPTICAL OUT
IC981
TC7SET08FUS1
CN954
INB
OUTY
INA
1
2
4
OPT5
OPT5
HSEN
OPT OUT
40
39
38
37
CN951
TO NAVI
1 CCR CCR 33
2 CCG CCG 32
3 CCB CCB 31
4 CCSYNC CCSYNC 30
5 GNDSIG GNDSIG 29
6 DVDVBS DVDVBS 28
7 GNDDVD GNDDVD 27
8 YS YS 26
10 CCAUL CCAUL 24
11 CCAUR CCAUR 23
12 GNDAU GNDAU 22
13 ONSEI+ ONSEI+ 21
14 ONSEI– ONSEI– 20
17 GNDRAU GNDRAU 17
18 CCREM CCREM 16
19 DSEN DSEN 15
20 TVON TVON 14
21 GION GION 13
24 HTXD HTXD 11
25 HRXD HRXD 10
26 GNDD GNDD 9
GNDD 8
GNDD 7
GNDD 6
GNDD 5
GNDD 4
GNDD 3
GNDD 2
A (2/2)CN151
CN952
A (2/2)CN154
1
2
3


J MAIN UNIT
CN3802
MOTOR DRIVER
CN3801
POSITION MOTOR
M
1 MO1
2 MOB
1
18
5
6
MTR1 6
MTR2 5
IC 3802
BA6247FP
REGULATOR FOR DRIVER
16
4
IC 3801
BA00AST
1
MTRPW 4
CN3803
ANGLE MOTOR
M
2 MO2
1 MOB
22
14
Q3801
MTRS 3
K VOLUME UNIT
Q3804
VDD 11
CN3809
CN3843
CN3842
CN3841
VR3841
1 ANGLV
2 ANGLIN0
3 ANGLG
1
IC 3803
TA78L05F
3
Q3802
VBU 18 19 20
SNSPW 10
Q3803
A (2/2)CN175
L SW UNIT
1
IC 3805
GP2L24B
3
2
IC 3804
TC7S14FU
4
LIFTPUL 2
CN3807
ANGLEIN 1
S3832 LIFTSW
S3831 ANGLE0SW
CN3833
CN3831
CN3832
1 LIFT
3 ANGLE0
2 GNDSNS
PUSHSW 9
ANGL0SW 8

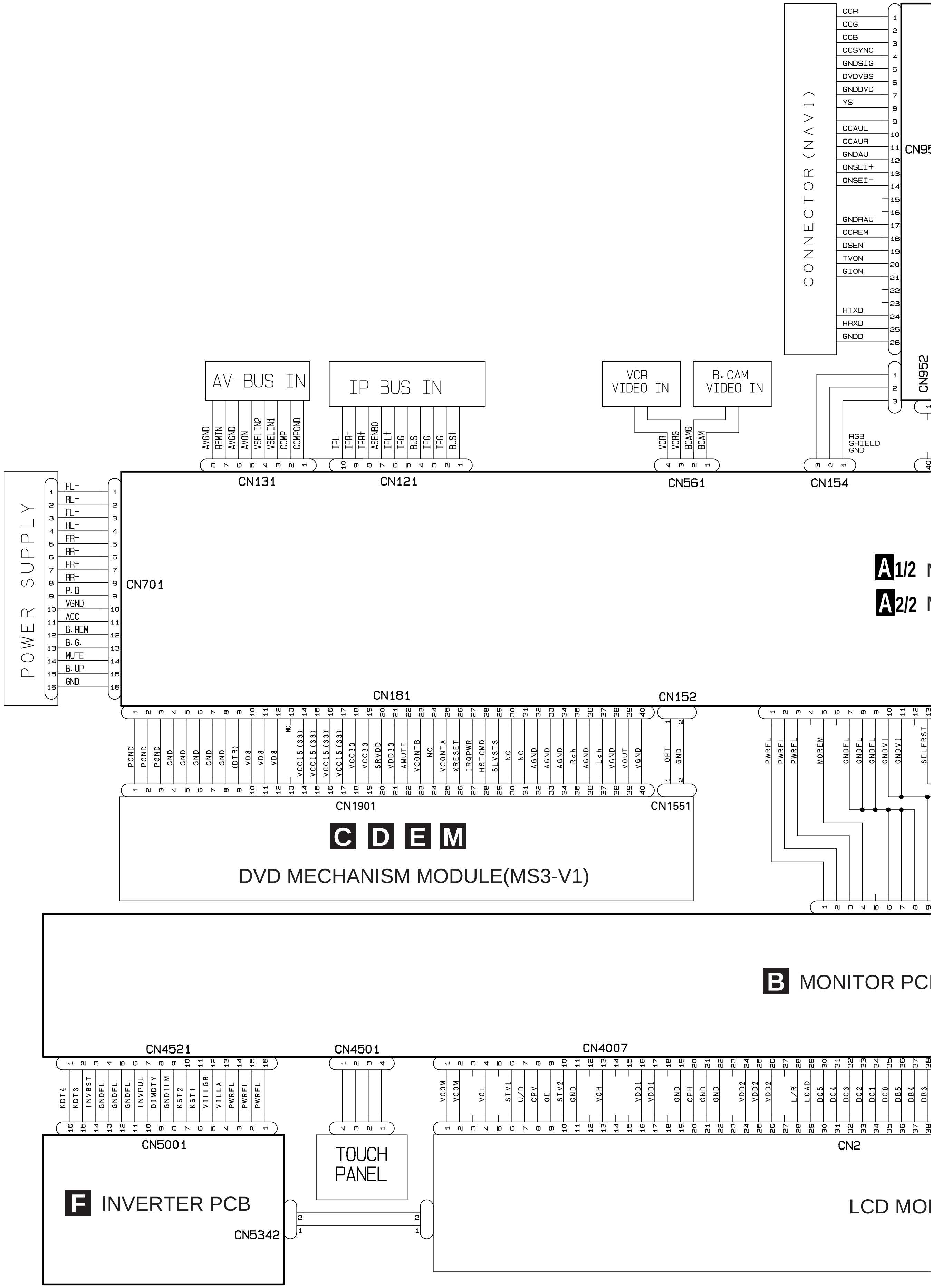
I KEYBOARD UNIT

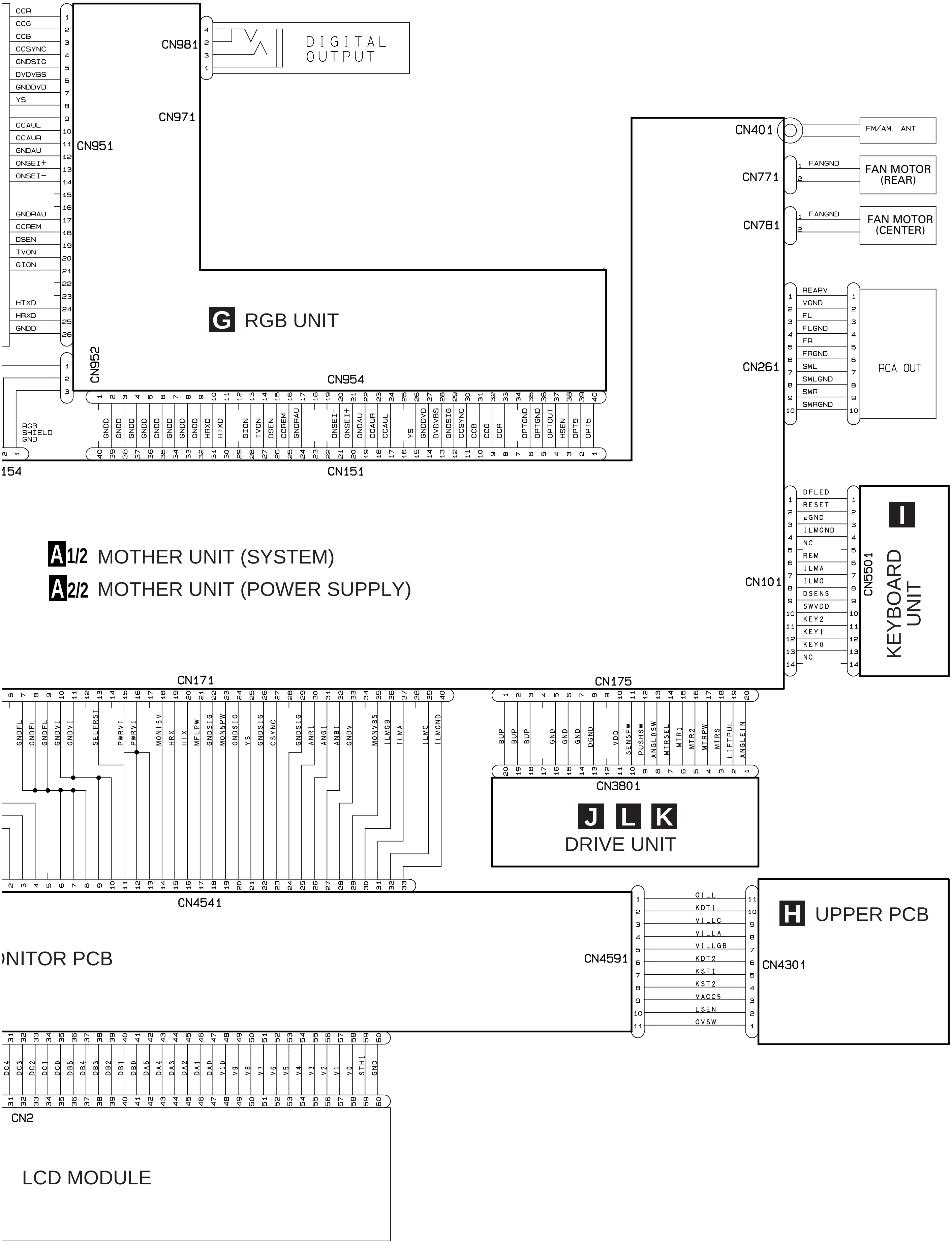

S5504
VOL
S5505
S5506
EJECT
SLOT ILM
S5501
SOURCE
S5503
S5502
– ANGLE +
S5507
S5508
ATT
EQ
S5509
BAND
S5515
A.MENU
S5512
S5514
S5511
S5513
S5510
BOOK.M
CN5501
KEY0
KEY1
KEY2
13
12
11
IC5501
TSOP4840SB1
1
3
SWVDD
10
S5517
DSENS
DSENS
9
D5510,D5512,D5514
D5516,D5518,D5520
D5522,D5524,D5526
ILMG
8
D5502-D5508
REM
6
S5516
RESET
RESET
2
D5528
DFLED
1
A (2/2)CN101


C DVD CORE UNIT
CN1101
PICKUP UNIT(SERVICE)
9
18
23
26
24
VSHF
Q1105
Q1104
Q1103
A,B1-4,C,RF+,RF-
65LD
78LD
Q1101
Q1106
Q1102
Q1107
133
135
62,66
LPCO1
LPCO2
FG
CPU
IC1501
MN35104UB
NRST
68
IECOUT
181
XCSSR
47
XCSFM
33
IC1671
TC74LCX16373AFT
LATCH
25,48
4
IC1672
TC7SZ08FU
2
1
SDRAM
IC1651
M5M5V216ATP-70HI
IC1652
TC7SZ126
A0-20,
ADT0-15
IC1601
PD6516A
FLASH MEMORY
A20
IC1570
K4S283232E-TC75
SDRAM
VCC15
DRIVER
IC1251
BA5985FM
FOP,FOM,TOP,TOM
FD,TD,MD,CRGDRV
9
LOM
10
LOP
COP,COM
10
CARRIGE
MOTOR
M
CN1201
M RELAY PCB
M
SPINDLE
MOTOR
IC 1201
AN8471SAT1
148
AD1
76
DRY6
LRCK
174
SRCK
175
EXADR18
39
IC1602
TC7SH86FU
1
2
4
DAC4OUT
163
M
LOADING
MOTOR
D COMPOUND UNIT(A)
12cm
8cm
Disc sens
Disc sens
8cm
S1201
S1202
S1203
S1204
S1205
DSCSNS
CN1231
IC1231
TC7SZ125FU
4
1
VDD33
ELERGENCY LOAD
92
OSCI
163
BECLK
CLOCK GENERATOR
3
15
IC1801
SM8707LV
14
13
1
2
IC1802
TC7WH157FU
6
5
39
43
42
CD/DVD
FSSW1
FSSW2
REV
XRES_M
21
25
IC1051
PE5401A
AMU
CLAMP SW
S1206
CLNP
E COMPOUND UNIT(B)


CN1903
XRES_M
9
CN1551
IECOUT
1
A (2/2)CN152
2
672
Z08FU
1
2
1
IC1652
TC7SZ126FU
0HI
H MEMORY
CN1901
IC1002
R1130H501B
1
2
5
VD
10
IC1001
S-L2980A50MC-C7J
5
1
3
VCONTB
23
6
IC1003
LTC3411EMS
1,2
Q1002
VCONTA
25
VCC15
6,7
VD
11
12
16
3
1
10
IC1851
PCM1742KE
DC-DC CONVERTER
7
ADAC
Q1551
VIDEO OUT
39
3
8
IC1853
NJM2100V
1
Lch OUT
37
A (2/2)CN181
2
1,2
21
25
EV
XRES_M
3,5
IC1852
NJM2140R
51
1A
AMUTE,XRES_S,IRQPWR,STSCOMN,CMDCOMN
VDD33
21

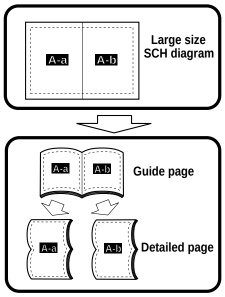
3.2 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)


CONNECTOR (NAVI)
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI-
GNDRAU
CCREM
DSEN
TVON
GION
HTXD
HRXD
GNDD
CN95
CN952
RGB SHIELD GND
AV-BUS IN
AVGND
REMIN
AVGND
AVON
VSELIN2
VSELIN1
COMP
COMPGND
CN131
IP BUS IN
IPL-
IPR-
IPR+
ASENBO
IPL+
IPG
BUS-
IPG
IPG
BUS+
CN121
VCR VIDEO IN
B.CAM VIDEO IN
VCR
VCRG
BCAMG
BCAM
CN561
CN154
POWER SUPPLY
FL-
RL-
FL+
RL+
FR-
RR-
FR+
RR+
P.B
VGND
ACC
B.REM
B.G.
MUTE
B.UP
GND
CN701
A 1/2
A 2/2
CN181
CN152
PGND
PGND
PGND
GND
GND
GND
GND
GND
(DTR)
VD8
VD8
VD8
NC
VCC15(33)
VCC15(33)
VCC15(33)
VCC15(33)
VCC33
VCC33
SRVDD
VDD33
AMUTE
VCONTB
NC
VCONTA
XRESET
IRQPWR
HSTCMD
SLVSTS
NC
NC
AGND
AGND
AGND
Rch
AGND
Lch
VGND
VOUT
VGND
OPT
GND
PWRFL
PWRFL
PWRFL
MOREM
GNDFL
GNDFL
GNDFL
GNDVI
GNDVI
SELFRST
CN1901
CN1551
C D E M
DVD MECHANISM MODULE(MS3-V1)
B MONITOR PC
CN4521
CN4501
CN4007
KDT4
KDT3
INVBST
GNDFL
GNDFL
INVPUL
DIMDTY
GNDILM
KST2
KST1
VILLGB
VILLA
PWRFL
PWRFL
PWRFL
VCOM
VCOM
VGL
STV1
U/D
CPV
OE
STV2
GND
VGH
VDD1
VDD1
GND
CPH
GND
GND
VDD2
VDD2
VDD2
L/R
LOAD
DC5
DC4
DC3
DC2
DC1
DC0
DB5
DB4
DB3
CN5001
TOUCH PANEL
CN2
F INVERTER PCB
CN5342
LCD MO


A
B
C
D
E
F
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI−
GNDRAU
CCREM
DSEN
TVON
GION
HTXD
HRXD
GNDD
CN951
CN952
RGB SHIELD GND
154
CN981
DIGITAL OUTPUT
CN971
G RGB UNIT
CN954
CN151
GNDD
HRXD
HTXD
GION
TVON
DSEN
CCREM
GNDRAU
ONSEI−
ONSEI+
GNDAU
CCAUR
CCAUL
YS
GNDDVD
DVDVBS
GNDSIG
CCSYNC
CCB
CCG
CCR
OPTGND
OPTOUT
HSEN
OPT5
CN401
FM/AM ANT
CN771
FANGND
FAN MOTOR (REAR)
CN781
FAN MOTOR (CENTER)
CN261
REARV
VGND
FL
FLGND
FR
FRGND
SWL
SWLGND
SWR
SWRGND
RCA OUT
CN101
DFLED
RESET
µGND
ILMGND
NC
REM
ILMA
ILMG
DSENS
SWVDD
KEY2
KEY1
KEY0
CN5501
I KEYBOARD UNIT
A 1/2 MOTHER UNIT (SYSTEM)
A 2/2 MOTHER UNIT (POWER SUPPLY)
CN171
GNDFL
GNDVI
SELFRST
PWRVI
MONI5V
HRX
HTX
MFLPW
GNDSIG
MON5PW
YS
CSYNC
ANR1
ANG1
ANB1
GNDV
MONVBS
ILMGB
ILMA
ILMC
ILMGND
CN175
BUP
GND
DGND
VDD
SENSPW
PUSHSW
ANGL0SW
MTRSEL
MTR1
MTR2
MTRPW
MTRS
LIFTPUL
ANGLEIN
CN3801
J L K DRIVE UNIT
CN4541
NITOR PCB
CN4591
GILL
KDT1
VILLC
VILLA
VILLGB
KDT2
KST1
KST2
VACC5
LSEN
GVSW
CN4301
H UPPER PCB
DC4
DC3
DC2
DC1
DC0
DB5
DB4
DB3
DB2
DB1
DB0
DA5
DA4
DA3
DA2
DA1
DA0
V10
V9
V8
V7
V6
V5
V4
V3
V2
V1
V0
STH1
GND
CN2
LCD MODULE

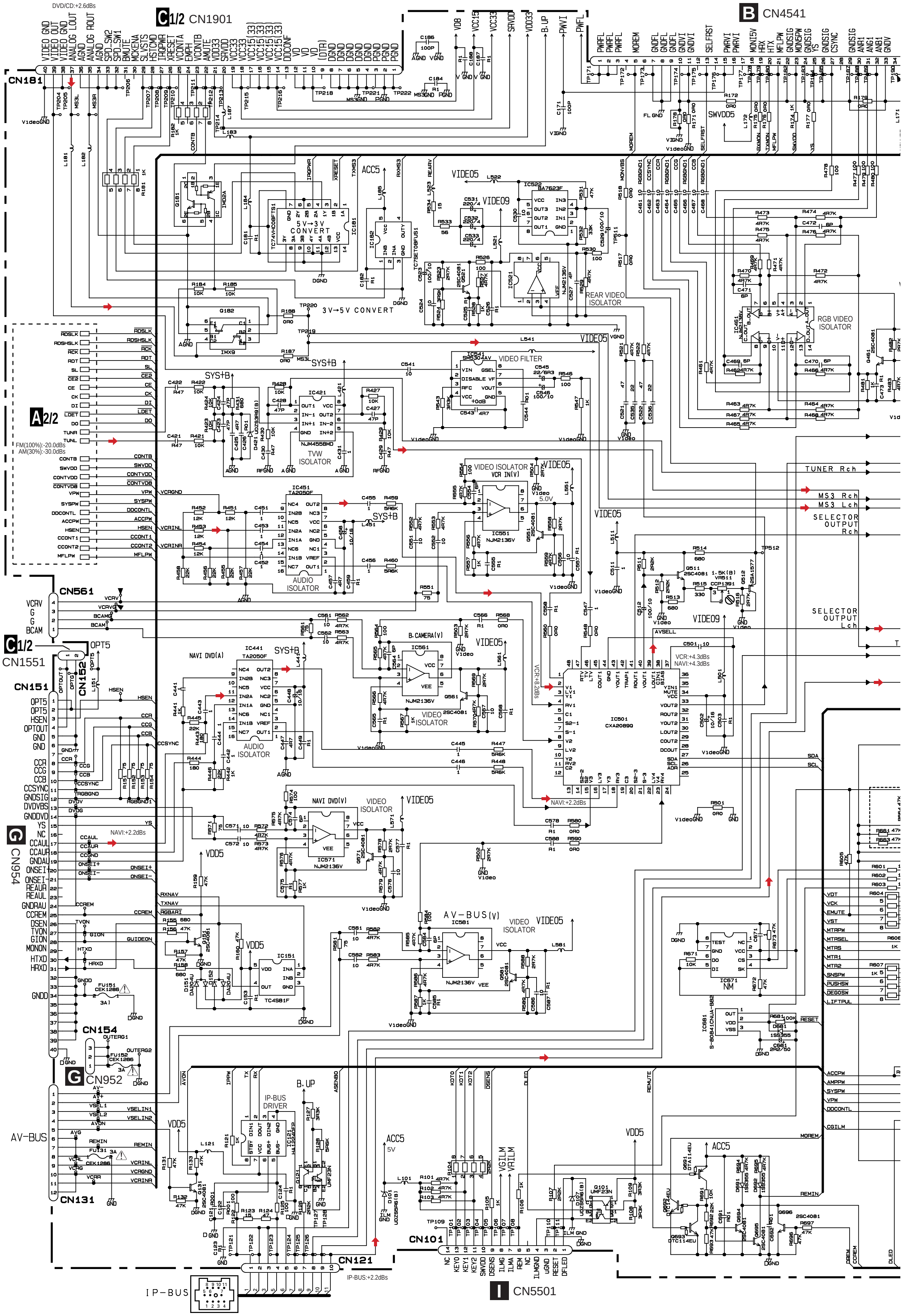
3.3 MOTHER UNIT(SYSTEM)(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A-a
A-b
Large size SCH diagram
A-a
A-b
Guide page
A-a
A-b
Detailed page

A-a 1/2



C 1/2 CN1901
B CN4541
CN181
A 2/2
CN561
C 1/2
CN1551
OPT5
CN152
CN151
G CN954
CN154
G CN952
AV-BUS
CN131
CN121
I-BUS
CN101
I CN5501
3V→5V CONVERT
5V→3V CONVERT
IC181 TC74VHC08FTS1
IC182 C75ET05FUS1
IC522 BA7623F
IC521 NJM2136V
REAR VIDEO ISOLATOR
RGB VIDEO ISOLATOR
IC541 SM5304AV VIDEO FILTER
IC421 NJM4558MD TVW ISOLATOR
IC451 TA2050F AUDIO ISOLATOR
VIDEO ISOLATOR VCR IN(V)
IC551 NJM2136V
SELECTOR OUTPUT Rch
SELECTOR OUTPUT Lch
TUNER Rch
MS3 Rch
MS3 Lch
IC441 TA2050F NAVI DVD(A) AUDIO ISOLATOR
B.CAMERA(V) IC561 VIDEO ISOLATOR
IC501 CXA2089Q
NAVI DVD(V) VIDEO ISOLATOR IC571 NJM2136V
AV-BUS(V) IC581 VIDEO ISOLATOR NJM2136V
IC151 TC4S81F
IC671 NM
IC681 S-80841CNUA
IP-BUS DRIVER IC121 HA12187FP
VIDEO5
VIDEO9
SYS+B
ACC5
VDD5
B.UP
VCR:+4.3dBs
NAVI:+4.3dBs
NAVI:+2.2dBs
FM(100%):-20.0dBs
AM(30%):-30.0dBs
DVD/CD:+2.6dBs
IP-BUS:+2.2dBs

A 1/2

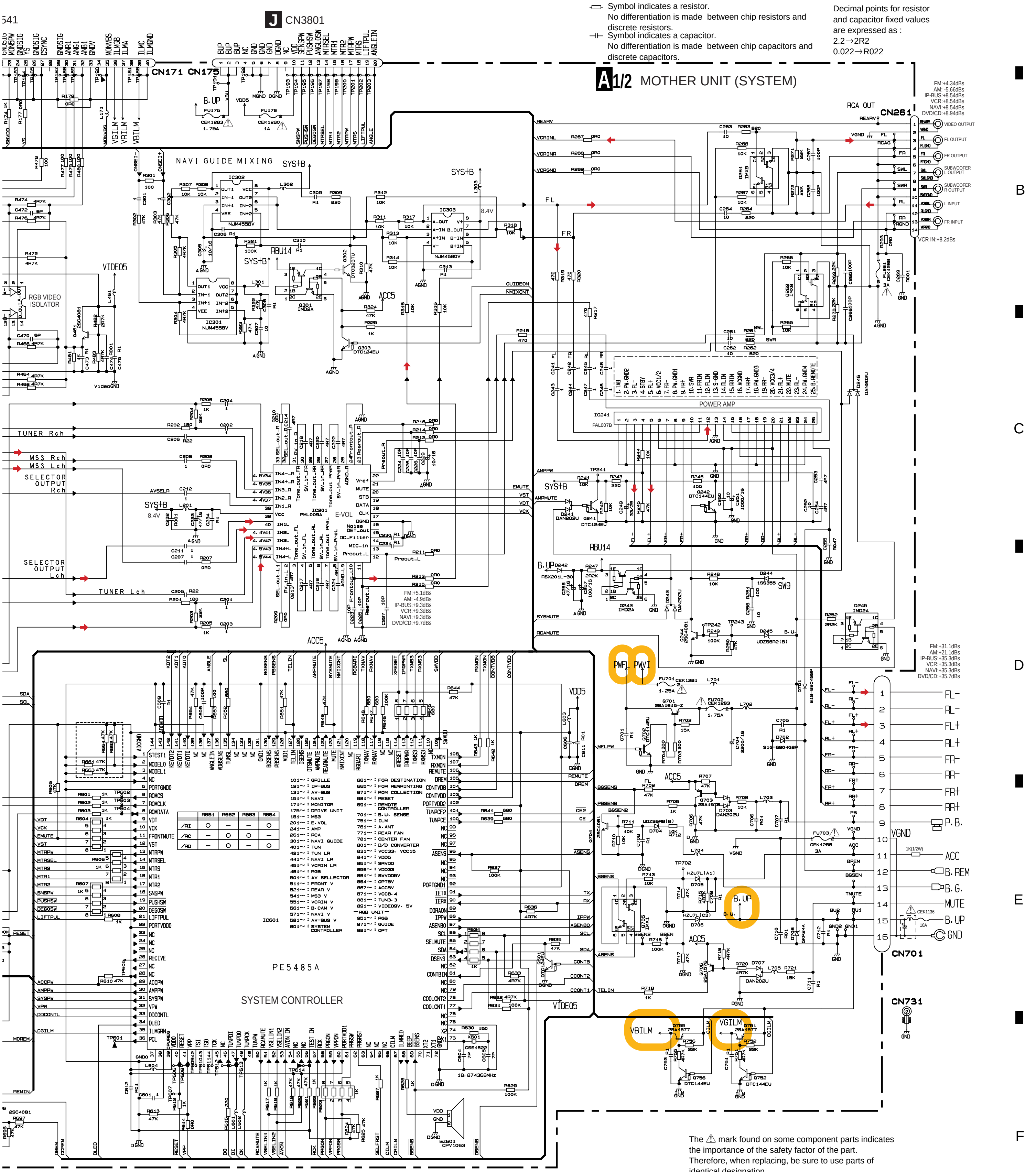
A-b 1/2

NOTE :

Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.

Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

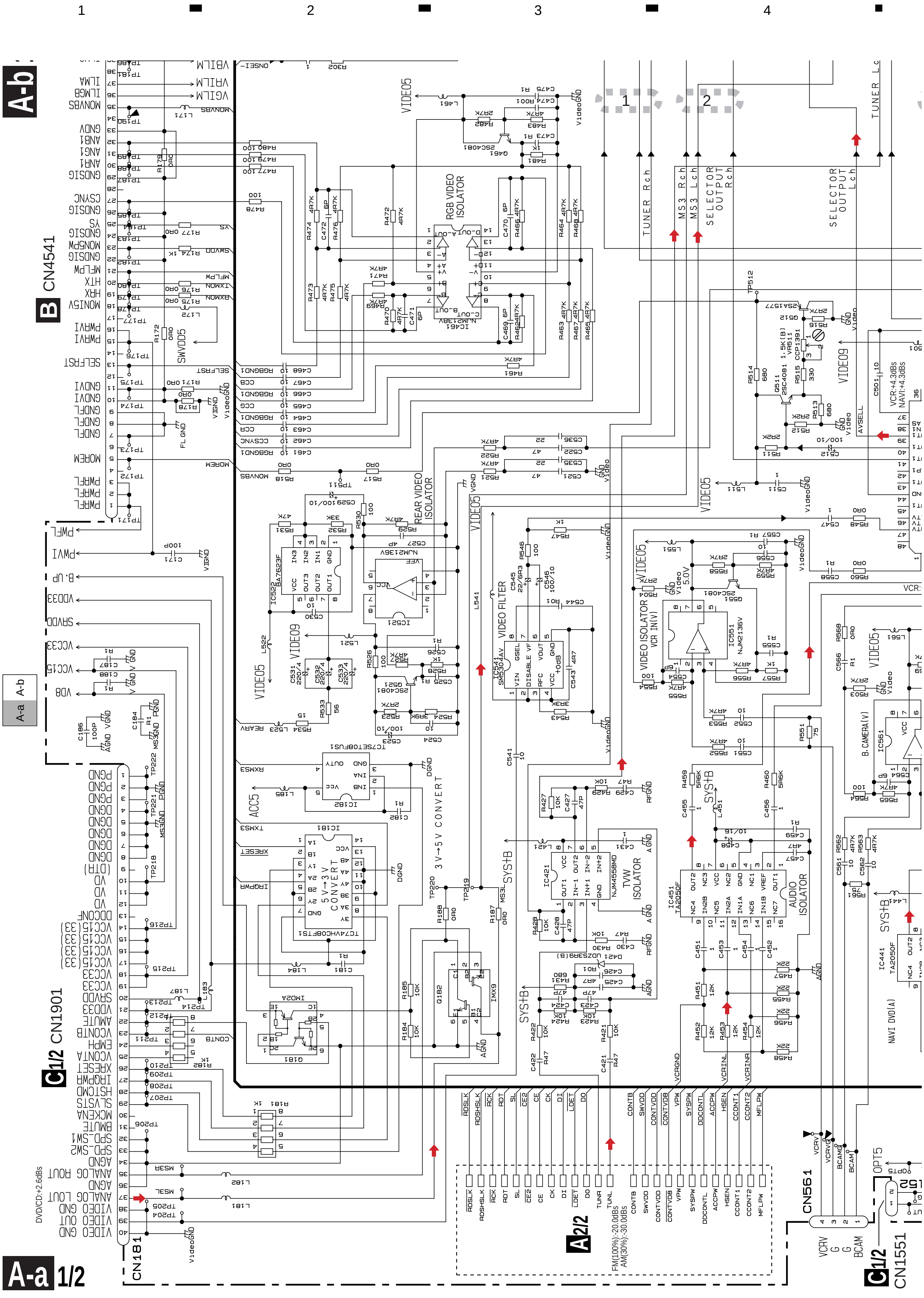
Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

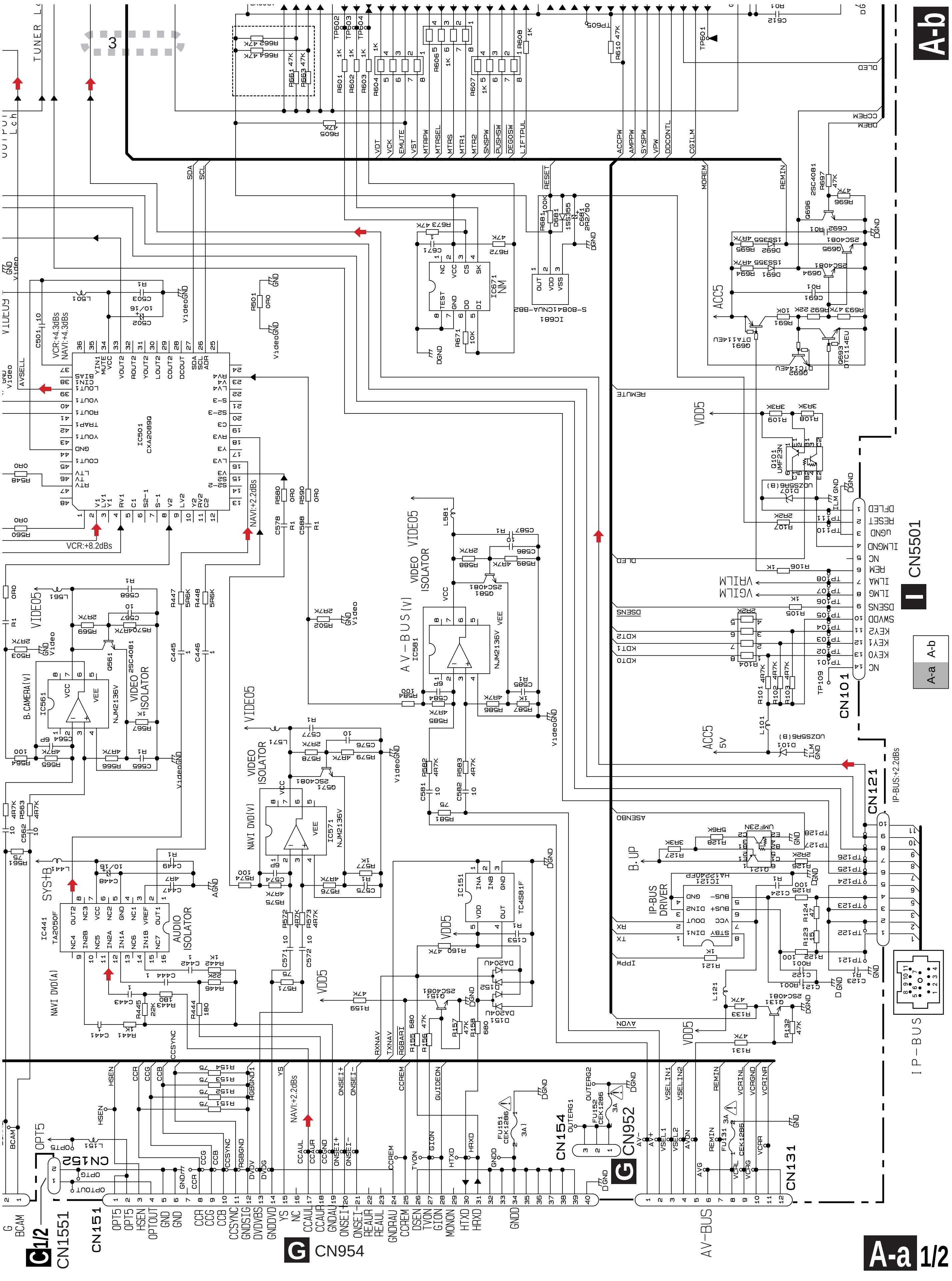

J CN3801
CN171 CN175
A 1/2 MOTHER UNIT (SYSTEM)
NAVI GUIDE MIXING
SYS+B
IC302 NJM4558V
IC303 NJM4580V
IC301 NJM4558V
RBU14
Q301 IMD2A
Q303 DTC124EU
RGB VIDEO ISOLATOR
VIDEO5
ACC5
TUNER Rch
MS3 Rch
MS3 Lch
SELECTOR OUTPUT Rch
SELECTOR OUTPUT Lch
TUNER Lch
IC201 PML009A E-VOL
FM:+5.1dBs
AM: -4.9dBs
IP-BUS:+9.3dBs
VCR:+9.3dBs
NAVI:+9.3dBs
DVD/CD:+9.7dBs
RCA OUT
CN261
FM:+4.34dBs
AM: -5.66dBs
IP-BUS:+8.54dBs
VCR:+8.54dBs
NAVI:+8.54dBs
DVD/CD:+8.94dBs
VIDEO OUTPUT
FL OUTPUT
FR OUTPUT
SUBWOOFER L OUTPUT
SUBWOOFER R OUTPUT
L INPUT
FR INPUT
VCR IN:+8.2dBs
FL
FR
IC241 PAL007B
POWER AMP
1.TAB
2.PW.GND2
3.FL-
4.STBY
5.FL+
6.VCC1/2
7.FR-
8.PW.GND1
9.FR+
10.SVR
11.FRIN
12.FLIN
13.S-GND
14.RLIN
15.RRIN
16.ACGND
17.RR+
18.PW.GND3
19.RR-
20.VCC3/4
21.RL+
22.MUTE
23.RL-
24.PW.GND4
25.B.REMOTE
RBU14
SW9
FM:+31.1dBs
AM:+21.1dBs
IP-BUS:+35.3dBs
VCR:+35.3dBs
NAVI:+35.3dBs
DVD/CD:+35.7dBs
PWFL
PWVI
VDD5
CN701
FL- RL- FL+ RL+ FR- RR- FR+ RR+ P.B. VGND ACC B.REM B.G. MUTE B.UP GND
CN731
VBILM
VGILM
VIDEO5
IC601
PE5485A
SYSTEM CONTROLLER
101～: GRILLE
121～: IP-BUS
131～: AV-BUS
151～: NAVI
171～: MONITOR
175～: DRIVE UNIT
181～: MS3
201～: E.VOL
241～: AMP
261～: RCA
301～: NAVI GUIDE
401～: TUN
421～: TUN LR
441～: NAVI LR
451～: VCRIN LR
461～: RGB
501～: AV SELLECTOR
511～: FRONT V
521～: REAR V
541～: MS3 V
551～: VCRIN V
561～: B.CAM V
571～: NAVI V
581～: AV-BUS V
601～: SYSTEM CONTROLLER
661～: FOR DESTINATION
665～: FOR REWRINTING
671～: ROM COLLECTION
681～: RESET
691～: REMOTE CONTROLLER
701～: B.U、SENSE
751～: ILM
761～: A.ANT
771～: REAR FAN
781～: CENTER FAN
801～: D/D CONVERTER
831～: VCC33、VCC15
841～: VDD5
851～: SRVDD
856～: VDD33
861～: SWVDD5V
864～: OPT5V
867～: ACC5V
871～: VCC8.4
881～: TUN3.3
891～: VIDEO9V、5V
—RGB UNIT—
951～: RGB
971～: GUIDE
981～: OPT
R651 R652 R653 R654
/RI ○ — — —
/RC — ○ ○ ○
/RD — ○ — ○
18.874368MHz
BZ601 CPV1063

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

: The power supply is shown with the marked box.

A 1/2

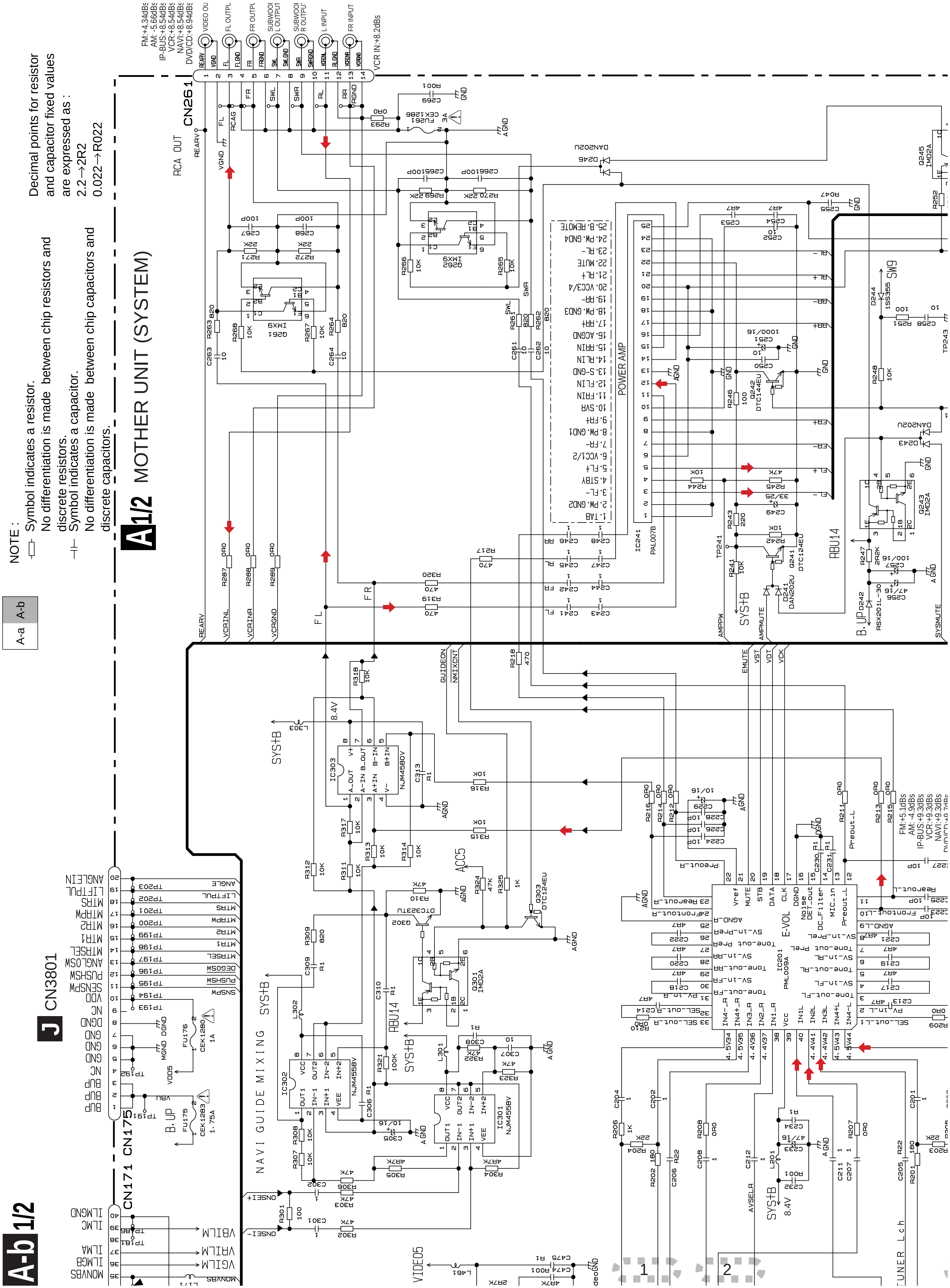

A-b
B CN4541
C1/2 CN1901
A-a 1/2
CN181
A2/2
C1/2 CN1551
CN561
RGB VIDEO ISOLATOR
IC461 NJM2136V
REAR VIDEO ISOLATOR
IC522 BA7623F
IC521 NJM2136V
VIDEO FILTER
IC541 SM5304AV
VIDEO ISOLATOR VCR IN(V)
IC551 NJM2136V
TVW ISOLATOR
IC421 NJM4558MD
AUDIO ISOLATOR
IC451 TA2050F
IC441 TA2050F
IC182 TC7SET08FUS1
IC181 TC74VHC08FTS1
3V→5V CONVERT
5V→3V CONVERT
Q181 IMD2A
Q182 IMX9
Q461 2SC4081
Q521 2SC4081
Q551 2SC4081
Q511 2SC4081
Q512 2SA1577
TUNER Rch
TUNER Lch
MS3 Rch
MS3 Lch
SELECTOR OUTPUT Rch
SELECTOR OUTPUT Lch
VIDEO5
VIDEO9
SYS+B
ACC5
B.CAMERA(V)
NAVI DVD(A)
VCR:+4.3dBs
NAVI:+4.3dBs
FM(100%):-20.0dBs
AM(30%):-30.0dBs
DVD/CD:+2.6dBs
VCRV
G
BCAM
OPT5
1
2
3
4
A
B
C
D
E
F


A-b
A-a 1/2
C 1/2
CN1551
CN151
CN152
G CN954
G CN952
CN154
CN131
AV-BUS
I CN5501
CN101
CN121
IP-BUS
IP-BUS:+2.2dBs
IC501 CXA2089Q
VCR:+4.3dBs
NAVI:+4.3dBs
VCR:+8.2dBs
NAVI:+2.2dBs
IC581 NJM2136V
AV-BUS(V)
VIDEO ISOLATOR
VIDEO5
IC571 NJM2136V
NAVI DVD(V)
IC561 NJM2136V
B.CAMERA(V)
IC441 TA2050F
AUDIO ISOLATOR
NAVI DVD(A)
SYS+B
IC151 TC4S81F
VDD5
IC121 HA12240FP
IP-BUS DRIVER
B.UP
ACC5
IC671 NM
IC681 S-80841CNUA-B82
TUNER
DFLED
RESET
uGND
ILMGND
NC
REM
ILMA
ILMG
DSENS
SWDD
KEY2
KEY1
KEY0
VRILM
VGILM
OPT5
HSEN
OPTOUT
GND
CCR
CCG
CCB
CCSYNC
GNDSIG
DVDVBS
GNDDVD
YS
CCAUL
CCAUR
GNDAU
ONSEI+
ONSEI-
REAUL
REAUR
GNDRAU
CCREM
DSEN
TVON
GION
MONON
HTXD
HRXD
GNDD
BCAM
AVSELL
AVON
REMIN
VCRIN
VCRGND
VCRIN
REMUTE
MOREM
CGILM
SDA
SCL
VDT
VCK
EMUTE
VST
MTRPW
MTRSEL
MTRS
MTR1
MTR2
SNSPW
PUSHSW
DEGOSW
LIFTPUL
ACCPW
AMPPW
SYSPW
VPW
DDCONTL
DLED
CCREM
DREM
ASENBO
IPPW
TX
RX
RXNAV
TXNAV
RGBARI
GUIDEON
VSELIN1
VSELIN2
FU151 CEK1286 3A
FU152 CEK1286 3A
FU131 CEK1286 3A
Q101 UMF23N
Q121 UMF23N
Q131 2SC4081
Q151 2SC4081
Q561 2SC4081
Q571 2SC4081
Q581 2SC4081
Q691 DTA114EU
Q692 DTC124EU
Q693 DTC114EU
Q694 2SC4081
Q695 2SC4081
Q696 2SC4081
D101 UDZS5R6(B)
D107 UDZS5R6(B)
D151 DA204U
D152 DA204U
D681 1SS355
D691 1SS355
D692 1SS355
videoGND
DGND
AGND

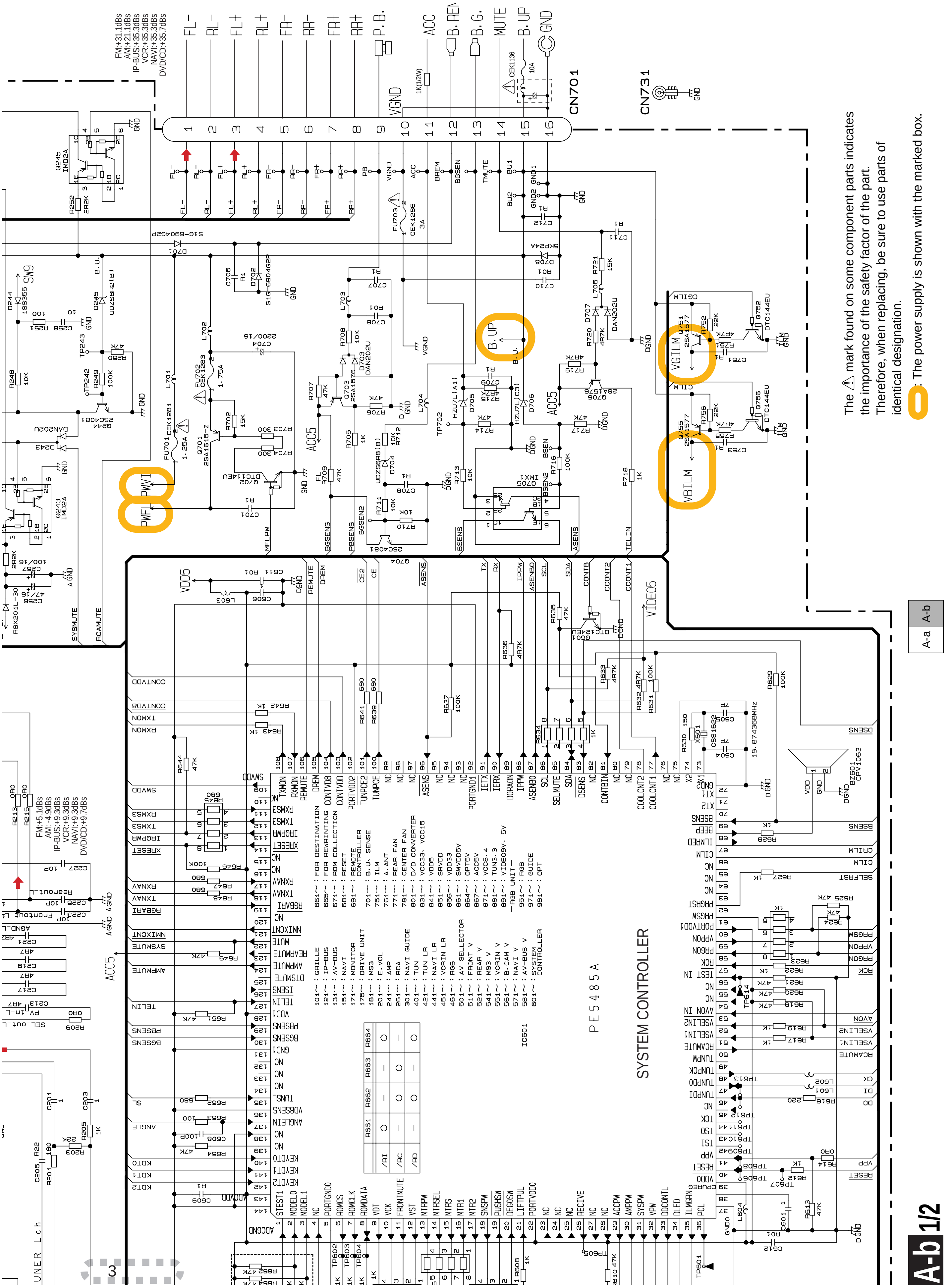
NOTE :
Symbol indicates a resistor.
No differentiation is made between chip resistors and discrete resistors.
Symbol indicates a capacitor.
No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2→2R2
0.022→R022

A 1/2 MOTHER UNIT (SYSTEM)



A-a
A-b
A-b 1/2
J CN3801
CN171
CN175
CN261
RCA OUT
FM:+4.34dBs
AM:-5.66dBs
IP-BUS:+8.54dBs
VCR:+8.54dBs
NAVI:+8.54dBs
DVD/CD:+8.94dBs
VIDEO OUT
FL OUTPUT
FR OUTPUT
SUBWOOFER L OUTPUT
SUBWOOFER R OUTPUT
L INPUT
FR INPUT
VCR IN:+8.2dBs
REARV
VCRINL
VCRINR
VCRGND
POWER AMP
IC241 PAL007B
1.TAB
2.PW.GND2
3.FL-
4.STBY
5.FL+
6.VCC1/2
7.FR-
8.PW.GND1
9.FR+
10.SVR
11.FRIN
12.FLIN
13.S-GND
14.RLIN
15.RRIN
16.ACGND
17.RR+
18.PW.GND3
19.RR-
20.VCC3/4
21.RL+
22.MUTE
23.RL-
24.PW.GND4
25.B.REMOTE
IC303 NJM4580V
IC302 NJM4558V
IC301 NJM4558V
IC201 PML009A
E-VOL
NAVI GUIDE MIXING
SYS+B
B.UP
ACC5
RBU14
SW9
AMPPW
AMPMUTE
SYSMUTE
EMUTE
VST
VDT
VCK
GUIDEON
NMIXCNT
FM:+5.1dBs
AM:-4.9dBs
IP-BUS:+9.3dBs
VCR:+9.3dBs
NAVI:+9.3dBs
ANGLEIN
LIFTPUL
MTRS
MTRPW
MTR2
MTR1
MTRSEL
ANGLOSW
PUSHSW
SENSPW
VDD
NC
DGND
GND
BUP
ILMGND
ILMC
ILMA
ILMGB
MONVBS
VBILM
VRILM
VGILM
ONSEI+
ONSEI-
VIDEO5
TUNER Lch
8.4V
AVSELR


A
B
C
D
E
F
CN701
CN731
FL− RL− FL+ RL+ FR− RR− FR+ RR+ P.B. VGND ACC B.REM B.G. MUTE B.UP GND
FM:+31.1dBs
AM:+21.1dBs
IP-BUS:+35.3dBs
VCR:+35.3dBs
NAVI:+35.3dBs
DVD/CD:+35.7dBs
FU703 CEK1286 3A
FU701 CEK1281 1.25A
FU702 CEK1283 1.75A
CEK1136 10A
Q245 IMD2A
Q243 IMD2A
Q244 2SC4081
Q701 2SA1615-Z
Q702 DTC114EU
Q703 2SA1576
Q704 2SC4081
Q705 IMX1
Q706 2SA1576
Q601 DTC124EU
Q751 2SA1577
Q752 DTC144EU
Q755 2SA1577
Q756 DTC144EU
D701 S1G-6904G2P
D702 S1G-6904G2P
D703 DAN202U
D704 UDZS8R2(B)
D705 HZU7L(A1)
D706 HZU7L(C3)
D707 DAN202U
D708 SKP24A
D243 DAN202U
D244 1SS355
D245 UDZS8R2(B)
C704 2200/16
VGILM
VBILM
PWFL
PWFLPW
ACC5
VDD5
VIDEO5
B.UP
B.U.
IC601
PE5485A
SYSTEM CONTROLLER
X601 CSS1622
18.874368MHz
BZ601 CPV1063
661~ : FOR DESTINATION
665~ : FOR REWRITING
671~ : ROM COLLECTION
681~ : RESET
691~ : REMOTE CONTROLLER
701~ : B.U. SENSE
751~ : ILM
761~ : A.ANT
771~ : REAR FAN
781~ : D/D CONVERTER
801~ : VCC33- VCC15
831~ : VDD5
841~ : SRVDD
851~ : VDD33
856~ : SWVDD5V
861~ : OPT5V
864~ : ACC5V
867~ : VCC8.4
871~ : TUN3.3
881~ : VIDEO9V. 5V
891~ : RGB UNIT
951~ : RGB
961~ : GUIDE
971~ : OPT
981~ : OPT
101~ : GRILLE
121~ : IP-BUS
131~ : AV-BUS
151~ : NAVI
171~ : MONITOR
175~ : DRIVE UNIT
181~ : MS3
201~ : E.VOL
241~ : AMP
261~ : RCA
301~ : NAVI GUIDE
401~ : TUN
421~ : TUN LR
441~ : NAVI LR
451~ : VCRIN LR
461~ : RGB
501~ : AV SELLECTOR
511~ : FRONT V
521~ : REAR V
541~ : MS3 V
551~ : VCRIN V
561~ : B.CAM V
571~ : NAVI V
581~ : AV-BUS V
601~ : SYSTEM CONTROLLER
R661 R662 R663 R664
/RI /RC /RD
TXMON RXMON REMUTE DREM CONTVDB CONTVDD PORTVDD2 TUNPCE2 TUNPCE ASENS PORTGND1 IETX IERX DORAON IPPW ASENBO SCL SELMUTE SDA DSENS CONTBIN COOLCNT2 COOLCNT1 X2 X1
SWVDD RXMS3 TXMS3 IRQPWR XRESET RXNAV TXNAV RGBAFI NMIXCNT MUTE REAMUTE AMPMUTE DTSMUTE ISENS TELIN IVDD1 PBSENS BGSENS GND1 TUNSL VDBSENS ANGLEIN KEYDT0 KEYDT1 KEYDT2
ADCGND TEST1 MODEL0 MODEL1 PORTGND0 ROMCS ROMCLK ROMDATA VDT VCK FRONTMUTE VST MTRPW MTRSEL MTRS MTR1 MTR2 SNSPW PUSHSW DEGOSW LIFTPUL PORTVDD0 RECIVE ACCPW AMPPW SYSPW VPW DDCONTL DLED ILMGRN PCL
GND2 VDDO RESET VPP TSI TSO TCK TUNPDI TUNPDO TUNPCK TUNPW RCAMUTE VSELIN1 VSELIN2 NAVON PRGON VPPON PRGSW PORTVDD1 PRGRST SELFRST CILM ILMRED BEEP BSENS XT2 XT1
CONTVDD CONTVDB TXMON RXMON SWVDD RXMS3 TXMS3 IRQPWR XRESET RXNAV TXNAV RGBAFI NMIXCNT SYSMUTE AMPMUTE TELIN PBSENS BGSENS SL ANGLE KDT0 KDT1 KDT2
DSENS BSENS CRILM CILM SELFRST PRGSW VPPON PRGON ACK NAVON VSELIN2 VSELIN1 RCAMUTE CK DI DO VPP RESET
SYSMUTE RCAMUTE
TUNER Lch
Rearout-L Frontout-L SEL-out-L PV_in-L
FM:+5.1dBs
AM:-4.9dBs
IP-BUS:+9.3dBs
VCR:+9.3dBs
NAVI:+9.3dBs
DVD/CD:+9.7dBs
AGND DGND GND
3

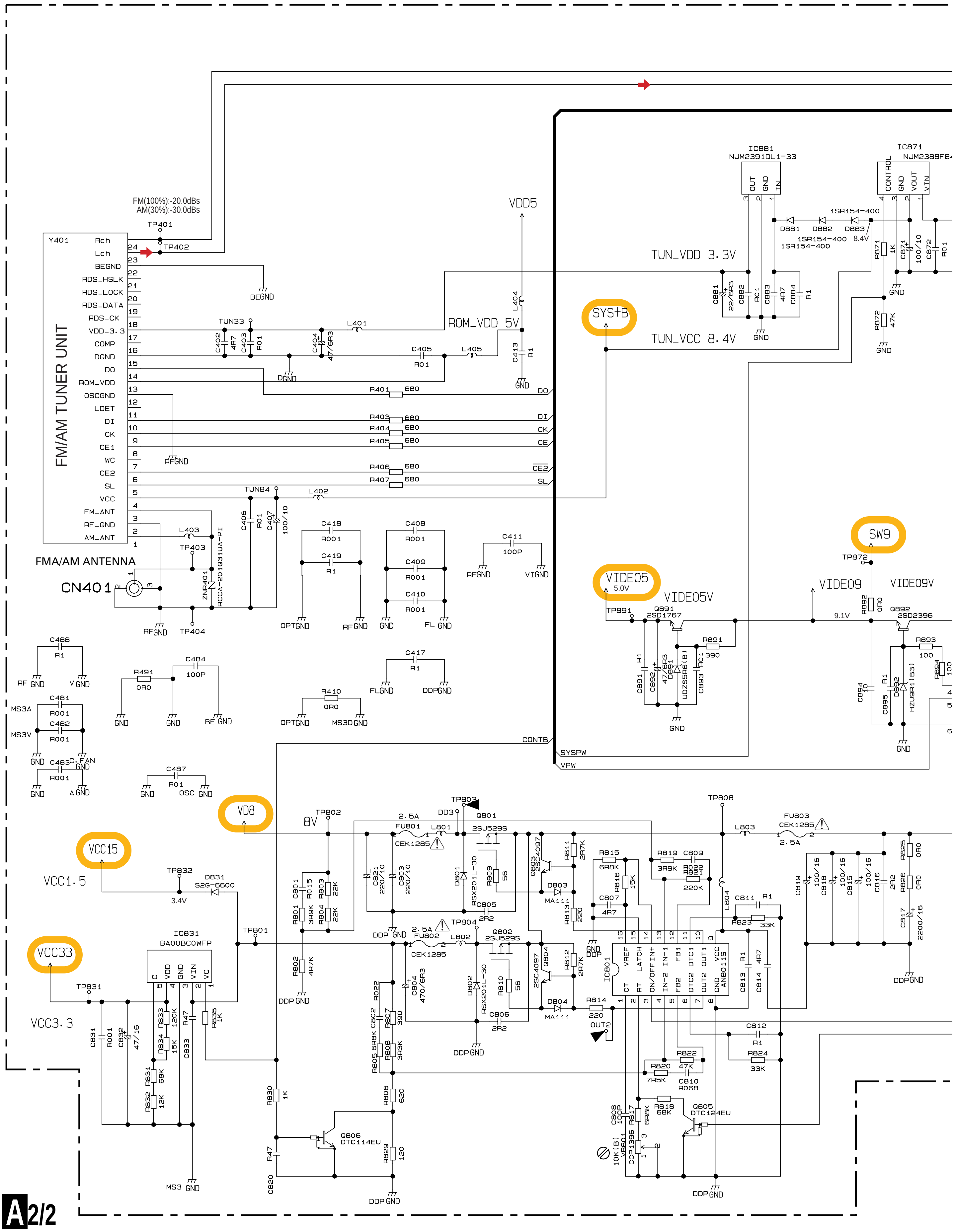
The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

▢ : The power supply is shown with the marked box.

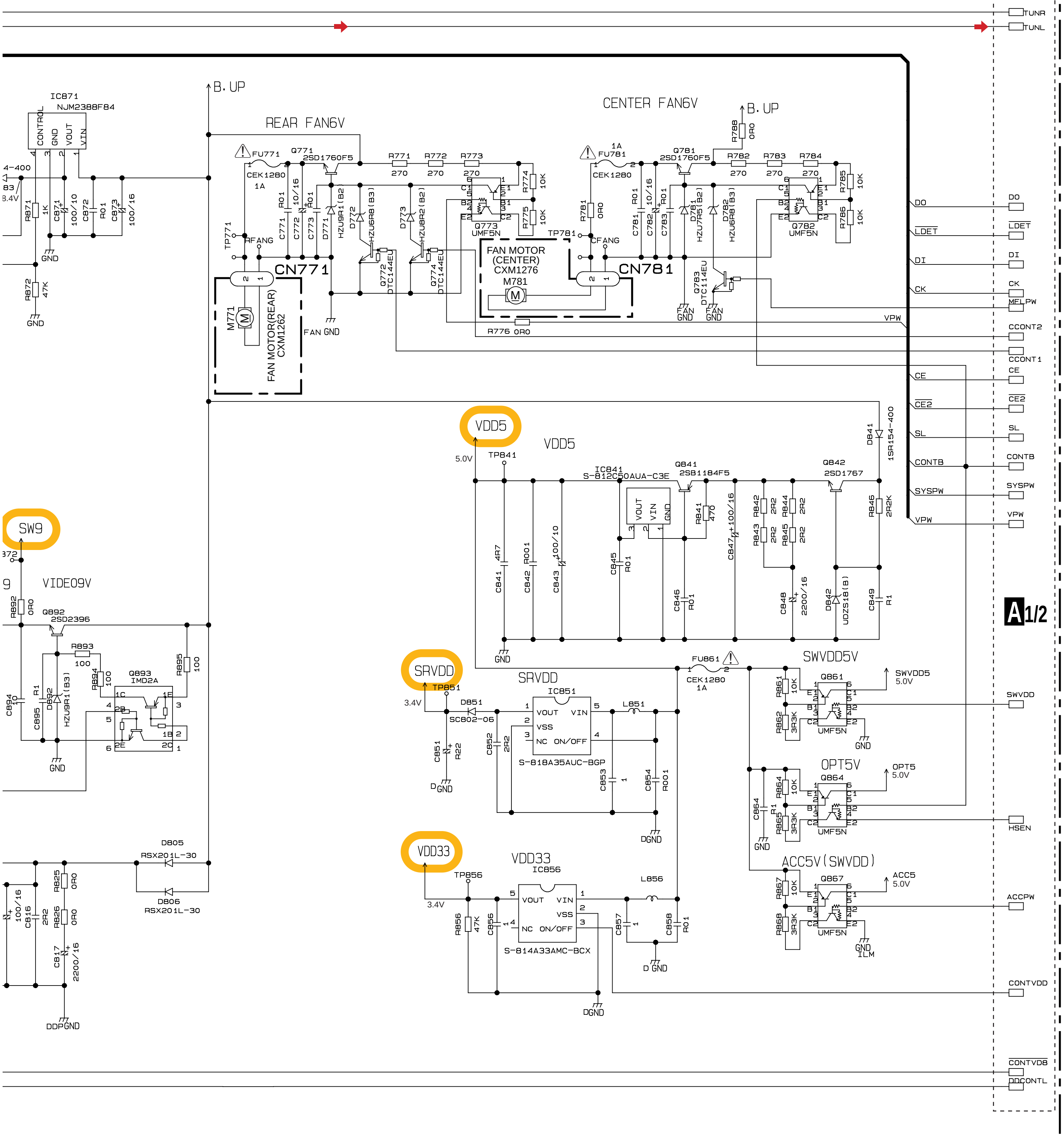
A-a	A-b

A-b 1/2

3.4 MOTHER UNIT(POWER SUPPLY)


FM(100%):-20.0dBs
AM(30%):-30.0dBs
TP401
TP402
Y401
FM/AM TUNER UNIT
Rch
Lch
BEGND
RDS_HSLK
RDS_LOCK
RDS_DATA
RDS_CK
VDD_3.3
COMP
DGND
DO
ROM_VDD
OSCGND
LDET
DI
CK
CE1
WC
CE2
SL
VCC
FM_ANT
RF_GND
AM_ANT
BEGND
TUN33
L401
ROM_VDD 5V
VDD5
L404
C402 4R7
C403 R01
C404 47/6R3
C405 R01
L405
C413 R1
DGND
GND
R401 680
R403 680
R404 680
R405 680
R406 680
R407 680
DO
DI
CK
CE
CE2
SL
RFGND
TUN84
L402
L403
TP403
C406 R01
C407 100/10
ZNR401
RCCA-201031UA-PI
FMA/AM ANTENNA
CN401
RFGND
TP404
C418 R001
C419 R1
OPTGND
RF GND
C408 R001
C409 R001
C410 R001
GND
FL GND
C411 100P
RFGND
VIGND
C488 R1
RF GND
V GND
C484 100P
R491 0R0
GND
BE GND
C417 R1
FLGND
DDPGND
R410 0R0
OPTGND
MS3DGND
MS3A
C481 R001
C482 R001
MS3V
GND
C483 R001
C.FAN GND
A GND
C487 R01
OSC GND
CONTB
SYSPW
VPW
TUN_VDD 3.3V
TUN_VCC 8.4V
SYS+B
IC881
NJM2391DL1-33
OUT GND IN
C881 22/6R3
C882 R01
C883 4R7
C884 R1
D881 D882 D883
1SR154-400
8.4V
IC871
NJM2388F84
CONTROL GND VOUT VIN
R871 1K
C871 100/10
C872 R01
R872 47K
GND
SW9
TP872
VIDEO5
5.0V
VIDEO5V
VIDEO9
VIDEO9V
TP891
Q891 2SD1767
R891 390
C891 R1
C892 47/6R3
D891 UDZS5R6(B)
C893 R01
9.1V
R892 0R0
Q892 2SD2396
R893 100
R894 100
C894 R1
C895
D892 HZU9R1(B3)
VD8
8V
TP802
TP803
DD3
Q801 2SJ529S
2.5A
FU801
CEK1285
L801
C801 R015
R801 3R9K
R803 22K
R804 22K
C821 220/10
C803 220/10
D801 RSX201L-30
R809 56
C805 2R2
Q803 2SC4097
R811 2R7K
D803 MA111
R813 220
TP804
DDP GND
FU802
L802
Q802 2SJ529S
C804 470/6R3
D802 RSX201L-30
R810 56
C806 2R2
Q804 2SC4097
R812 2R7K
D804 MA111
DDP GND
R802 4R7K
R022
C802
R805 6R8K
R807 390
R808 3R3K
R806 820
R829 120
Q806 DTC114EU
R830 1K
R47
C820
VCC15
VCC1.5
TP832
D831 S2G-6600
3.4V
TP801
IC831 BA00BCOWFP
C VDD GND VIN VC
VCC33
VCC3.3
TP831
C831 R01
C832 47/16
R833 120K
R834 15K
R831 68K
R832 12K
R47
C833
R835 1K
MS3 GND
R815 6R8K
R816 15K
C807 4R7
R819 3R9K
C809
R821 220K
IC801 AN8011S
VREF LATCH IN+ FB1 DTC1 OUT1 VCC
CT RT ON/OFF IN-2 IN-1 FB2 DTC2 OUT2 GND
DDP
R814 220
OUT2
R822 47K
R820 7R5K
C810 R068
C808 100P
R817 6R8K
R818 68K
Q805 DTC124EU
VR801 10K(B) CCP1396
TP808
L803
L804
FU803 CEK1285
2.5A
C811 R1
R823 33K
C813 R1
C814 4R7
C812 R1
R824 33K
C819 100/16
C818 100/16
C815 100/16
C816 2R2
C817 2200/16
R825 0R0
R826 0R0
DDPGND

A 2/2 MOTHER UNIT (POWER SUPPLY)

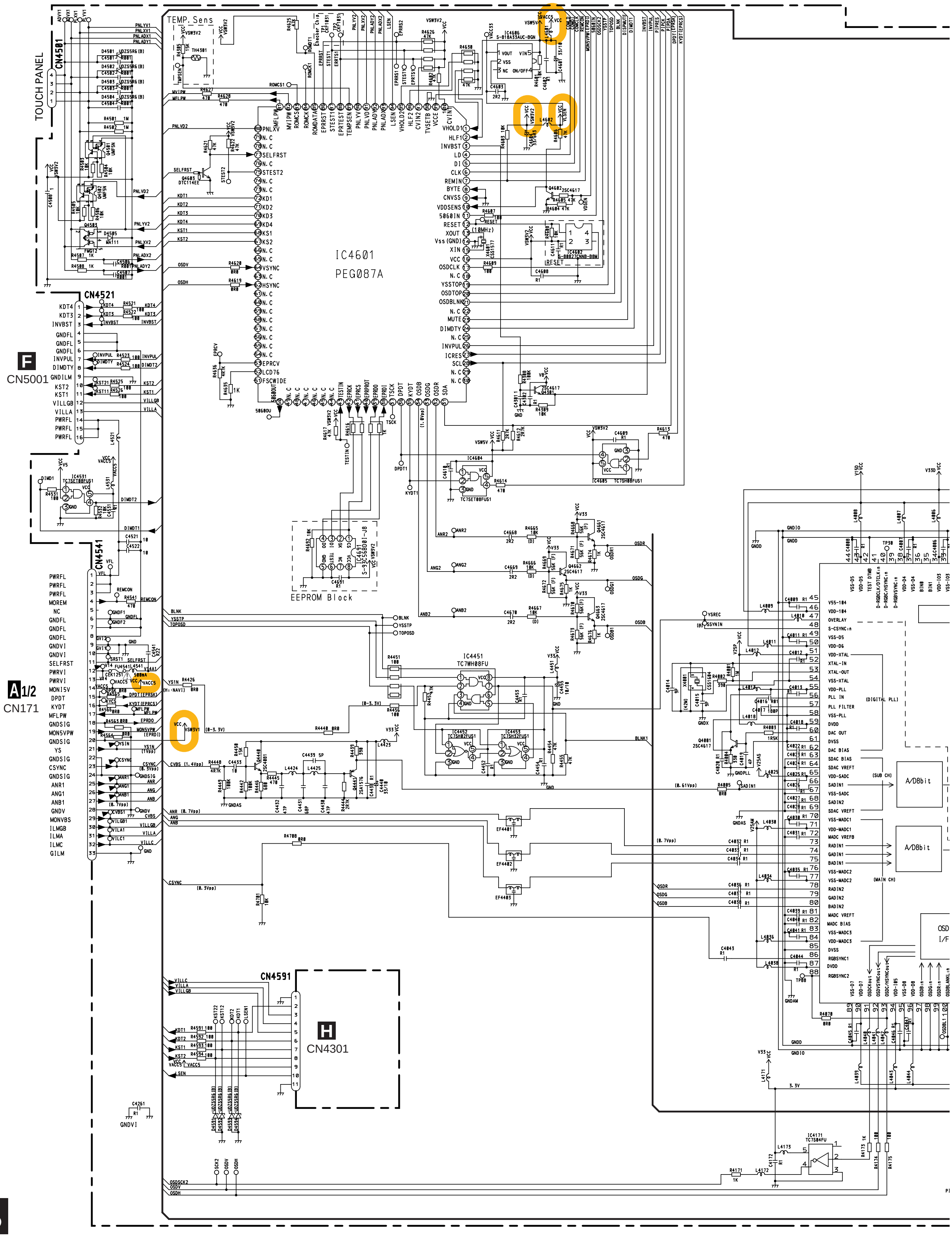


B
C
D
E
IC871
NJM2388F84
CONTROL
GND
VOUT
VIN
R871 1K
C871 100/10
C872 R01
C873 100/16
R872 47K
GND
B. UP
REAR FAN6V
FU771
CEK1280
1A
Q771
2SD1760F5
R771 270
R772 270
R773 270
R774 10K
R775 10K
C771 R01
C772 10/16
C773 R01
D771 HZU9R1(B2)
D772 HZU6R8(B3)
D773 HZU8R2(B2)
Q772 DTC144EU
Q774 DTC144EU
Q773 UMF5N
TP771
FANG
CN771
M771
FAN MOTOR(REAR)
CXM1262
FAN GND
CENTER FAN6V
B. UP
R788 0R0
FU781
1A
CEK1280
Q781
2SD1760F5
R782 270
R783 270
R784 270
R785 10K
R786 10K
R781 0R0
C781 R01
C782 10/16
C783 R01
D781 HZU7R5(B2)
D782 HZU6R8(B3)
Q782 UMF5N
TP781
FANG
CN781
FAN MOTOR
(CENTER)
CXM1276
M781
Q783 DTC114EU
FAN GND
R776 0R0
VPW
TUNR
TUNL
DO
LDET
DI
CK
MFLPW
CCONT2
CCONT1
CE
CE2
SL
CONTB
SYSPW
VPW
VDD5
5.0V
TP841
VDD5
IC841
S-812C50AUA-C3E
VOUT
VIN
GND
Q841
2SB1184F5
R841 470
Q842
2SD1767
D841
1SR154-400
C841 4R7
C842 R001
C843 100/10
C845 R01
C846 R01
C847 100/16
R842 2R2
R843 2R2
R844 2R2
R845 2R2
R846 2R2K
C848 2200/16
D842 UDZS18(B)
C849 R1
GND
SW9
VIDEO9V
R892 0R0
Q892
2SD2396
R893 100
R894 100
R895 100
Q893
IMD2A
C894 10
C895 R1
D892 HZU9R1(B3)
GND
SRVDD
TP851
3.4V
D851
SC802-06
SRVDD
IC851
VOUT
VIN
VSS
NC
ON/OFF
S-818A35AUC-BGP
L851
C851 22
C852 2R2
C853 1
C854 R001
DGND
FU861
CEK1280
1A
SWVDD5V
Q861
UMF5N
R861 10K
R862 3R3K
SWVDD5
5.0V
SWVDD
GND
OPT5V
Q864
UMF5N
R864 10K
R865 3R3K
C864 R1
OPT5
5.0V
HSEN
GND
ACC5V(SWVDD)
Q867
UMF5N
R867 10K
R868 3R3K
ACC5
5.0V
ACCPW
GND
ILM
VDD33
TP856
3.4V
VDD33
IC856
S-814A33AMC-BCX
R856 47K
C856 1
C857 1
C858 R01
L856
D GND
DGND
CONTVDD
CONTVDB
DDCONTL
D805
RSX201L-30
D806
RSX201L-30
R825 0R0
R826 0R0
C815 100/16
C816 2R2
C817 2200/16
DDPGND
A 1/2

A 2/2

3.5 MONITOR PCB(GUIDE PAGE)

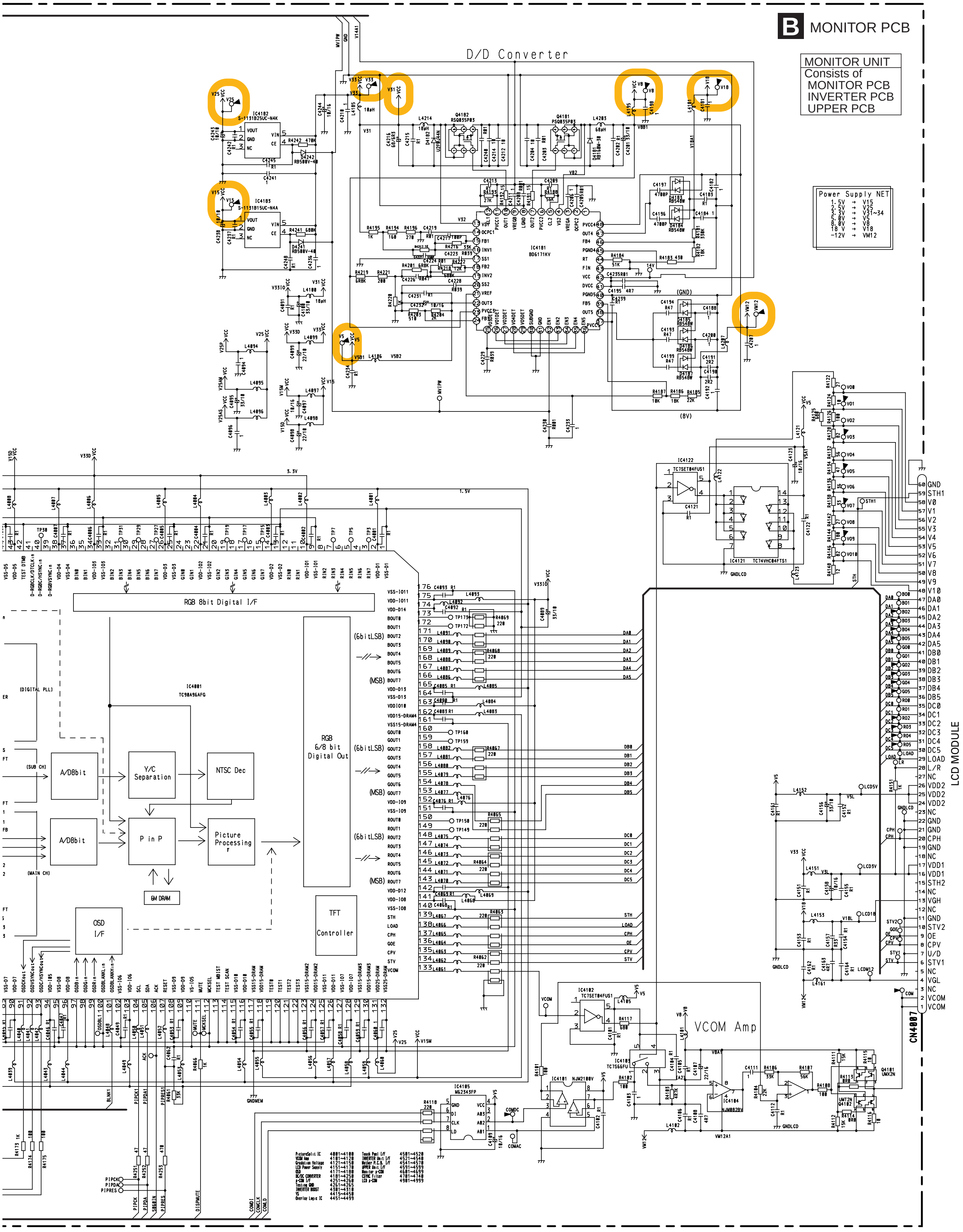
B-a



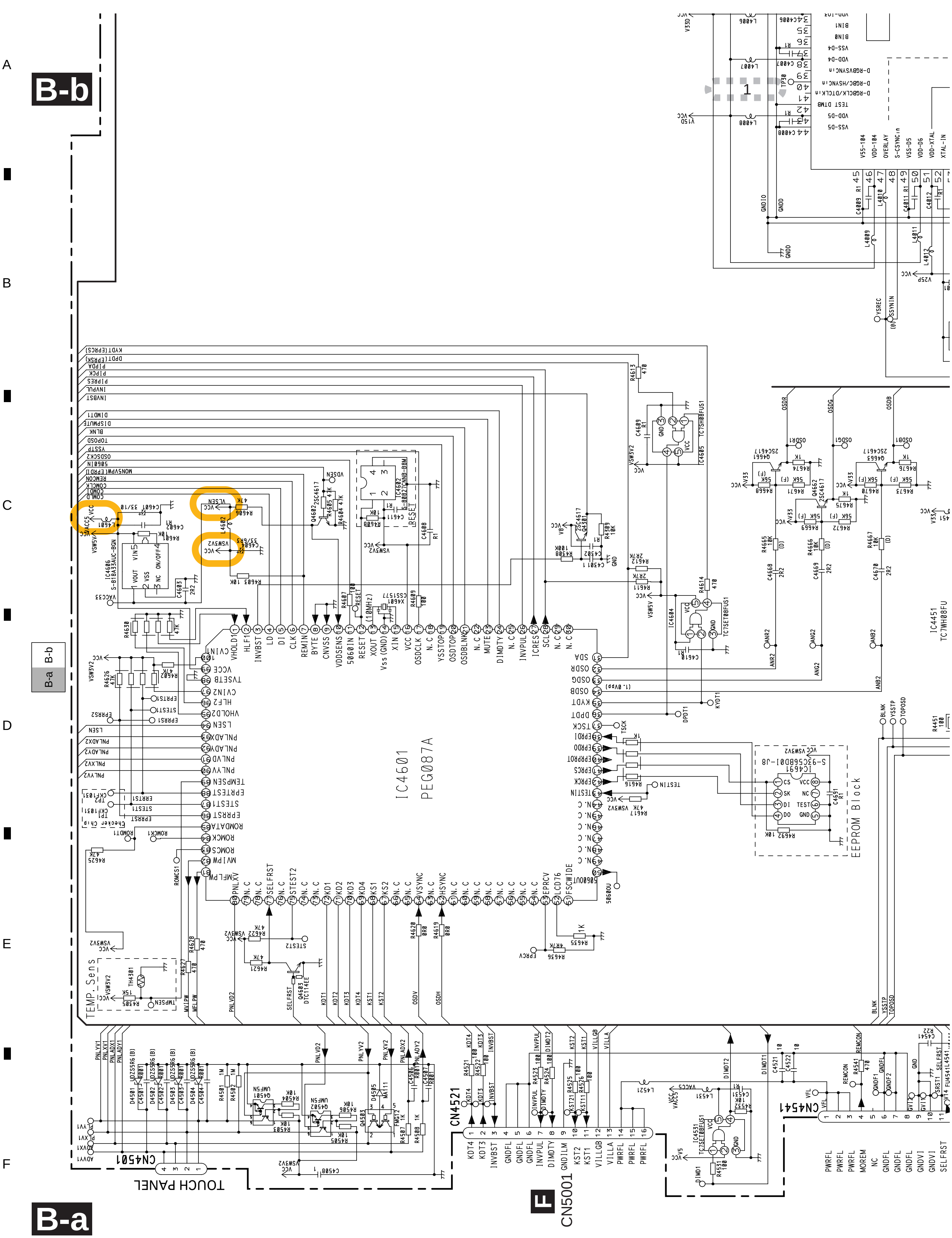
TOUCH PANEL
CN4501
CN4521
F
CN5001
CN4541
A1/2
CN171
TEMP. Sens
IC4601
PEG087A
IC4606
S-818A33AUC-BGN
IC4602
S-80827CNNB-B8W
IC4604
TC7SET08FUS1
IC4605
TC7SH08FUS1
IC4531
TC7SET08FUS1
IC4691
S-93C56BD01-J8
EEPROM Block
IC4451
TC7W08FU
IC4452
TC7SH02FUS1
IC4453
TC7SH02FUS1
CN4591
H
CN4301
IC4171
TC7S04FU
A/D8bit
A/D8bit
OSD I/F
(DIGITAL PLL)
(SUB CH)
(MAIN CH)

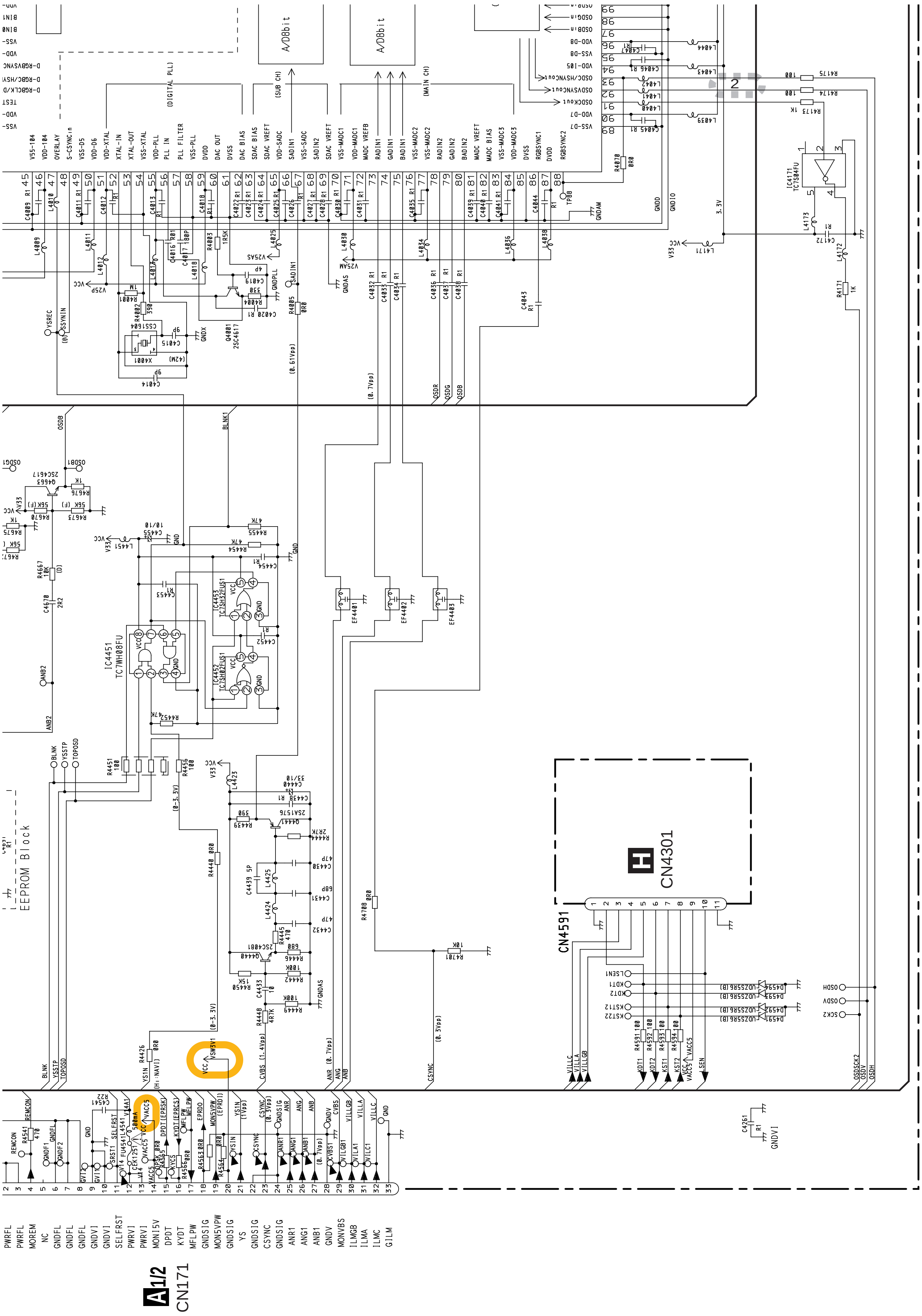
B

B-b


B MONITOR PCB
MONITOR UNIT
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB
D/D Converter
Power Supply NET
1.5V → V15
2.5V → V25
3.3V → V31~34
5.0V → V5
8.0V → V8
18 V → V18
−12V → VM12
IC4181
BD6171KV
IC4182
S-1131B25UC-N4K
IC4183
S-1131B15UC-N4A
Q4102
RSQ035P03
Q4101
RSQ035P03
IC4122
TC7SET04FUS1
IC4121
TC74VHC04FTS1
IC4801
TC90A96AFG
RGB 8bit Digital I/F
(DIGITAL PLL)
(SUB CH)
(MAIN CH)
A/D8bit
Y/C Separation
NTSC Dec
P in P
Picture Processing
8M DRAM
OSD I/F
RGB 6/8 bit Digital Out
TFT Controller
(6bitLSB)
(MSB)
IC4102
TC7SET04FUS1
IC4101 NJM2100V
IC4103
TC7S66FU
IC4104
NJM082BV
IC4105
M62343FP
VCOM Amp
Q4101
UMX2N
Q4102
UMT2N
CN4807
LCD MODULE

B


A
B
C
D
E
F
B-b
B-a
IC4601
PEG087A
IC4606
S-818A33AUC-BGN
IC4691
S-93C56BD01-J8
EEPROM Block
IC4451
TC7WH08FU
IC4604
TC7SET08FUS1
IC4605
TC7SH08FUS1
IC4531
TC7SET08FUS1
IC4602
S-80827CNNB-B8M
X4601
CSS1577
(10MHz)
Q4601
UMF5N
Q4602
UMF5N
Q4603
DTC114EE
Q4604
2SC4617
Q4661
2SC4617
Q4662
2SC4617
Q4663
2SC4617
Q4301
2SC4617
TH4301
TEMP. Sens
Checker Chip
CN4501
TOUCH PANEL
CN4521
CN4541
CN5001
F
VCC
VSW3V2
VSW5V
V33
VLSEN
INVBST
CLK
REMIN
BYTE
CNVSS
VDDSENS
5060IN
RESET
XOUT
XIN
Vss (GND)
OSDCLK
YSSTOP
OSDTOP
OSDBLNK
MUTE
DIMDTY
INVPUL
ICRES
SCL
SDA
OSDR
OSDG
OSDB
KYDT
DPDT
TSCK
EPRDI
EPRDO
EPRPOT
EPRCS
EPRCK
TESTIN
ROMDATA
ROMCK
ROMCS
MWIPW
MELPW
PNLVX
SELFRST
STEST2
KD1
KD2
KD3
KD4
KS1
KS2
VSYNC
HSYNC
EPRCV
LCD76
FSCWIDE
5060OUT
VHOLD1
HLF1
LD
DI
CVIN1
VDCC
TVSLAB
CVIN2
HLF2
VHOLD2
LSEN
PNLADX
PNLADY
PNLVD
PNLVV
TEMPSEN
ERRTEST
STEST
EPRRST
PNLVY1
PNLXV1
PNLADX1
PNLADY1
PNLVD2
PNLYV2
PNLXV2
PNLADX2
PNLADY2
KDT4
KDT3
INVBST
GNDFL
INVPUL
DIMDTY
GNDILM
KST2
KST1
VILLGB
VILLA
PWRFL
REMCON
NC
GNDVI
SELFRST
DIMDT1
DIMDT2
VFL
VACC5
V33D
V15D
V25P
TEST DIMB
VDD-D5
VSS-D5
VSS-D4
VDD-D4
BIN1
BIN0
D-RGBVSYNC in
D-RGBC/HSYNC in
D-RGBCLK/DTCLK in
VSS-I04
VDD-I04
OVERLAY
S-CSYNC in
VSS-D6
VDD-D6
VDD-XTAL
XTAL-IN
TP30
VSREC
VSSYNIN
ANB2
ANG2
ANR2
BLNK
YSSTP
TOPOSD
KYDT(EPRCS)
DPDT(EPRSK)
PIPDA
PIPCK
PIPRES
INVPUL
INVBST
DIMDT1
DISPMUTE
BLNK
TOPOSD
YSSTP
OSDSCK2
5060IN
MONSVPW(EPRDI)
REMCON
COMCLK
COMDI
COMD0
VACC33
(1.0Vpp)
1
2
3
4


A/D8bit
A/D8bit
(DIGITAL PLL)
(SUB CH)
(MAIN CH)
X4001
Q4001 2SC4617
Q4663 2SC4617
IC4171 TC7SU04FU
IC4451 TC7WH08FU
IC4452 TC7SH08FUS1
IC4453 TC7SH32FUS1
Q4441 2SA1576
Q4440 2SC4081
EF4401
EF4402
EF4403
EEPROM Block
H
CN4301
CN4591
A 1/2
CN171
D4591
D4592
D4593
D4594
VSW3V1
VCC
TP88
GNDAM
GNDD
GNDIO
3.3V
OSDR
OSDG
OSDB
BLNK1
OSDCK2
OSDV
OSDH
SCK2
CSYNC
PWRFL
PWRFL
MOREM
NC
GNDFL
GNDFL
GNDFL
GNDVI
GNDVI
SELFRST
PWRVI
PWRVI
MON15V
DPDT
KYDT
MFLPW
GNDSIG
MON5VPW
GNDSIG
YS
GNDSIG
CSYNC
GNDSIG
ANR1
ANG1
ANB1
GNDV
MONVBS
ILMGB
ILMA
ILMC
GILM

A

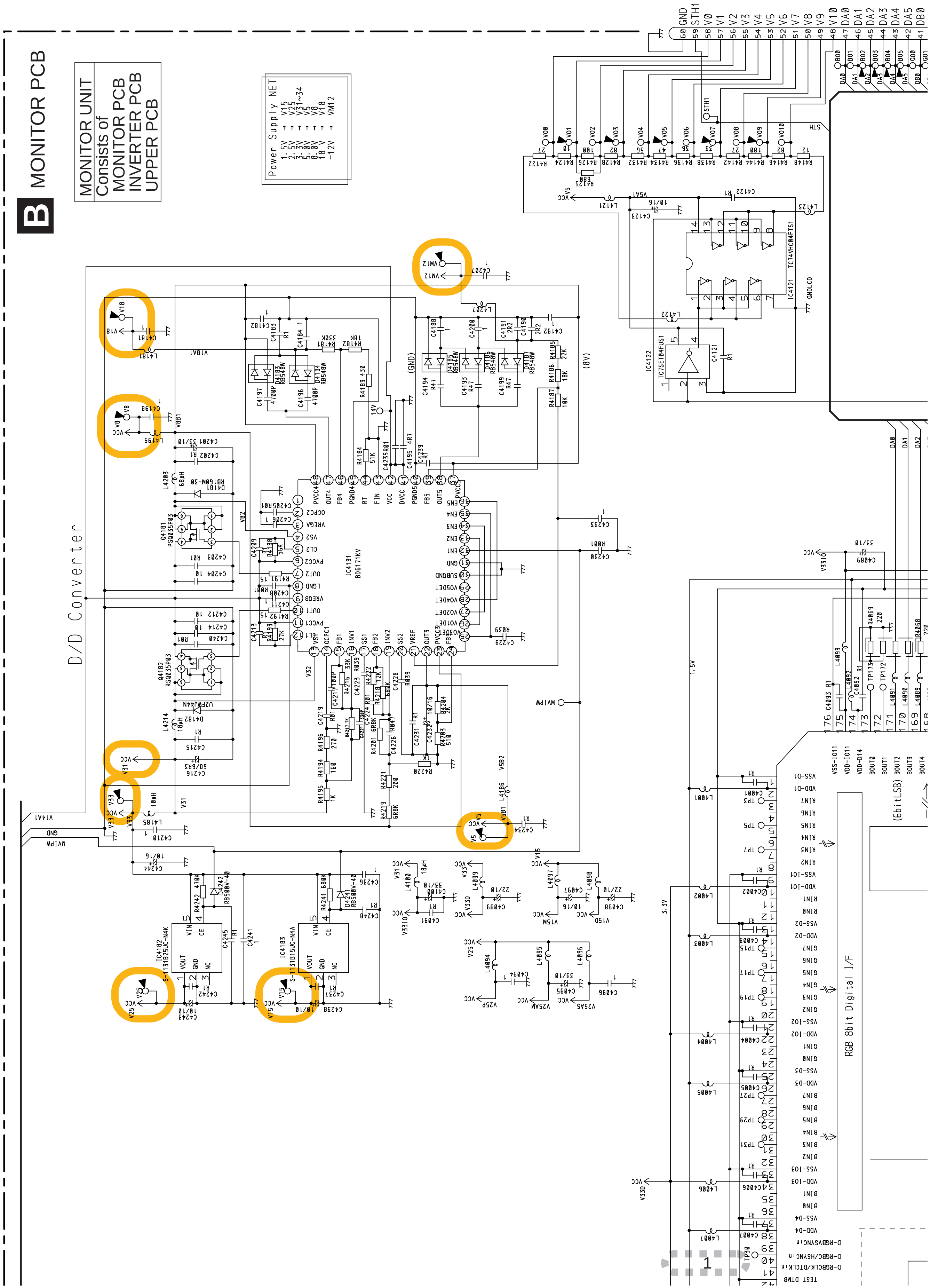
B

C

D

E

F



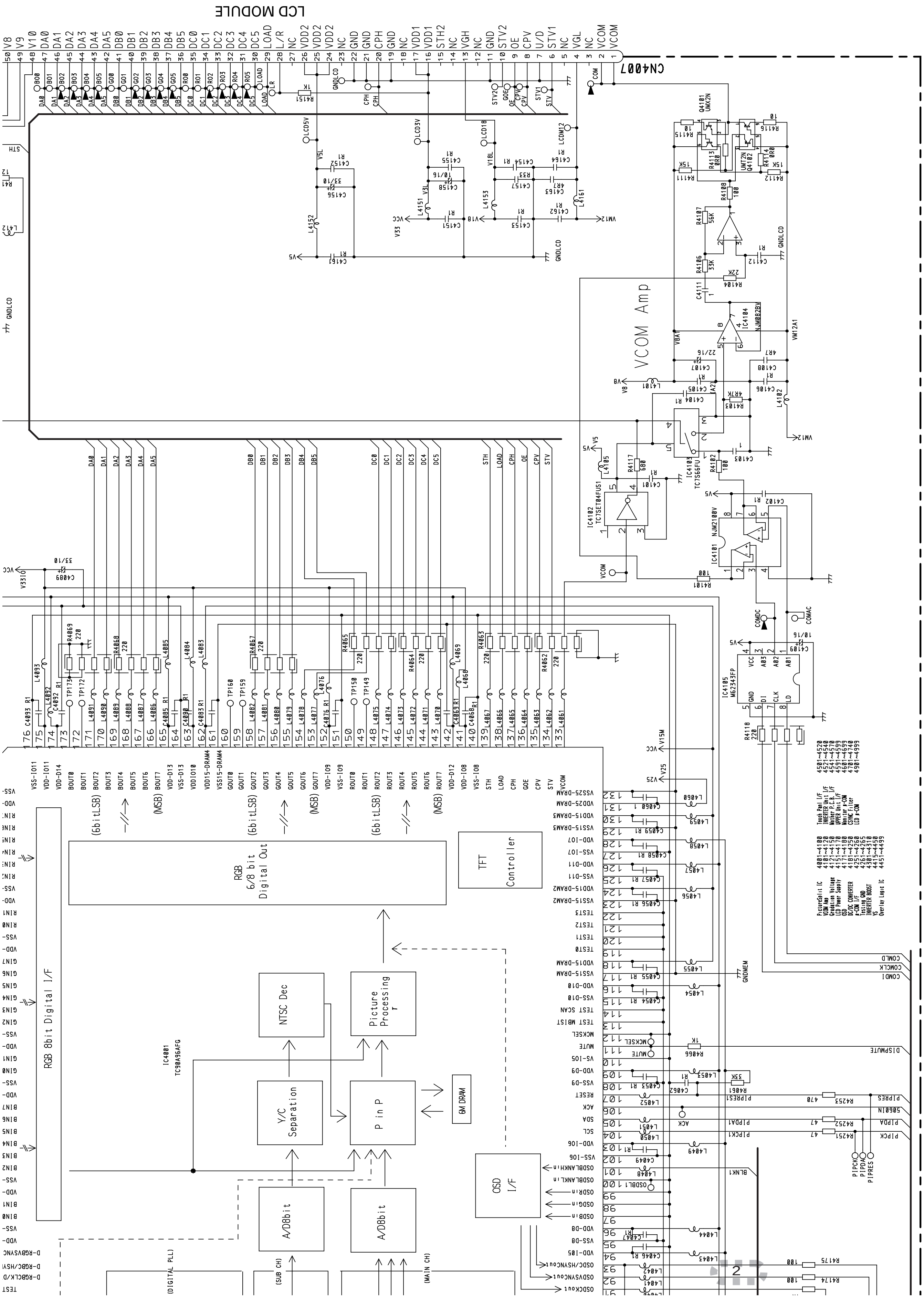
B MONITOR PCB

MONITOR UNIT
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB

Power Supply NET
1.5V → V15
2.5V → V25
3.3V → V31~34
5.0V → V5
8.0V → V8
18V → V18
-12V → VM12

D/D Converter
IC4181 BD6171KV
IC4182 S-1131B25UC-N4K
IC4183 S-1131B15UC-N4A
IC4121 TC74VHC04FTS1
IC4122 TC7SET04FUS1
Q4181 RSQ035P03
Q4182 RSQ035P03
D4181 RB160M-30
D4182 UDZW24N
D4183 RB548W
D4184 RB548W
D4185 RB548W
D4186 RB548W
D4241 RB500V-40
D4242 RB500V-40
V18
V8
VCC
V31
V33
V25
V15
V5
VM12
V14A1
GND
MWIPM
(GND)
(8V)
GNDLCD
1.5V
3.3V
V33D
V331D
V15M
V15D
V25P
V25AM
V25AS
RGB 8bit Digital I/F
(6bitLSB)
60 GND
59 STH1
58 V0
57 V1
56 V2
55 V3
54 V4
53 V5
52 V6
51 V7
50 V8
49 V9
48 V10
47 DA0
46 DA1
45 DA2
44 DA3
43 DA4
42 DA5
41 DB0
TEST DTMB
D-RGBCLK/DTCLK in
D-RGBC/HSYNC in
D-RGBVSYNC in

B-a B-b


LCD MODULE
CN4007
VCOM Amp
Q4101 UMX2N
Q4102 UMT2N
IC4101 NJM2100V
IC4102 TC7SET04FU
IC4103 TC7S66FU
IC4104 NJM082BV
IC4105 M62343FP
IC4001 TC90A96AFG
RGB 6/8 bit Digital Out
TFT Controller
NTSC Dec
Picture Processing
Y/C Separation
P in P
6M DRAM
OSD I/F
A/D8bit
A/D8bit
RGB 8bit Digital I/F
(SUB CH)
(MAIN CH)
(DIGITAL PLL)
DISPMUTE
PIPRES
PIPDA
PIPCK
COMLD
COMCLK
COMDI

1 2 3 4

3.6 DVD CORE UNIT(SODC)

A

C-a 1/2

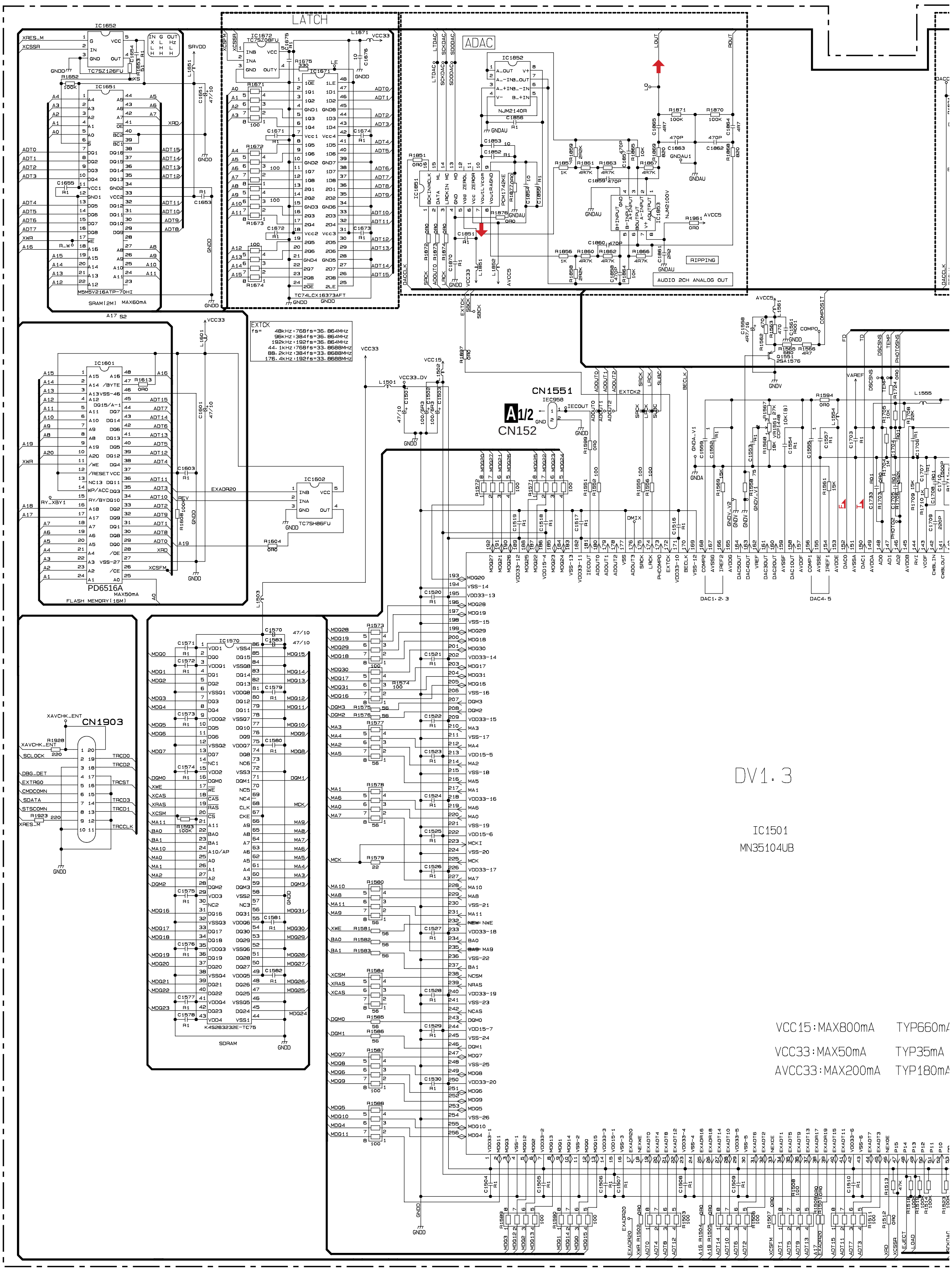
B

C

D

E

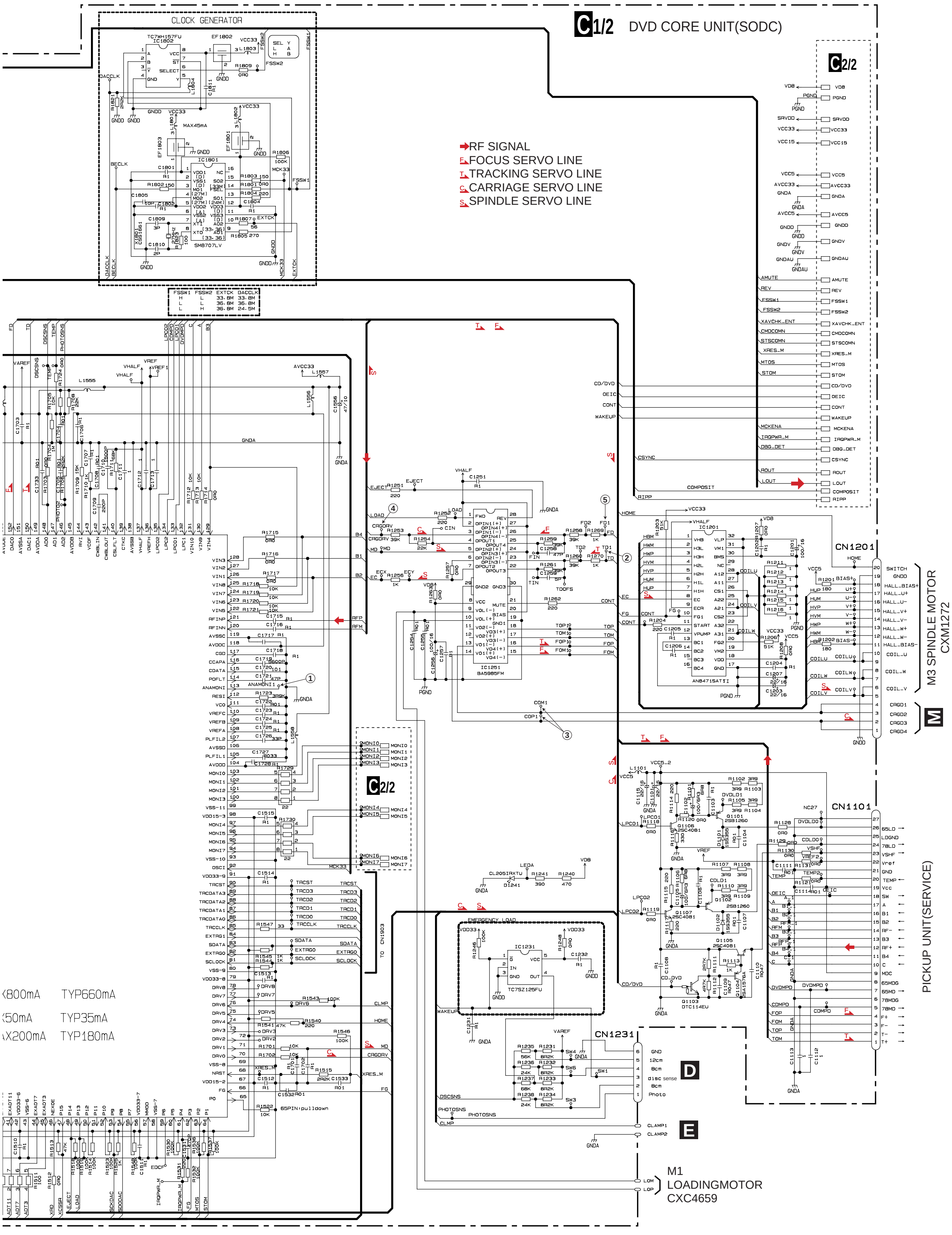
F



IC1652
TC7SZ126FU
IC1651
M5M5V216ATP-70HI
SRAM(2M) MAX60mA
LATCH
IC1672
TC7SZ08FU
IC1671
TC74LCX16373AFT
ADAC
IC1852
NJM2140R
IC1851
PCM1742KE
IC1853
NJM2100V
RIPPING
AUDIO 2CH ANALOG OUT
IC1601
PD6516A
MAX50mA
FLASH MEMORY(16M)
EXTCK
fs= 48kHz:768fs=36.864MHz
96kHz:384fs=36.864MHz
192kHz:192fs=36.864MHz
44.1kHz:768fs=33.8688MHz
88.2kHz:384fs=33.8688MHz
176.4kHz:192fs=33.8688MHz
IC1602
TC7SH86FU
CN1551
A 1/2
CN152
IEC958
IECOUT
Q1551
2SA1576
COMPO
CN1903
XAVCHK_ENT
SCLOCK
DBG_DET
EXTRG0
CMDCOMN
SDATA
STSCOMN
XRES_M
IC1570
K4S283232E-TC75
SDRAM
DV1.3
IC1501
MN35104UB
VCC15:MAX800mA TYP660mA
VCC33:MAX50mA TYP35mA
AVCC33:MAX200mA TYP180mA
DAC1,2,3
DAC4,5

C 1/2

C-b 1/2


C 1/2 DVD CORE UNIT(SODC)
CLOCK GENERATOR
TC7WH157FU
IC1802
EF1802
IC1801
SM8707LV
MAX45mA
FSSW1 FSSW2 EXTCK DACCLK
H L 33.8M 33.8M
L L 36.8M 36.8M
L H 36.8M 24.5M
C 2/2
RF SIGNAL
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE
IC1251
BA5985FM
IC1201
AN8471SATII
CN1201
M3 SPINDLE MOTOR
CXM1272
M
CN1101
PICKUP UNIT(SERVICE)
EMERGENCY LOAD
IC1231
TC7SZ125FU
CN1231
12cm
8cm
disc sense
8cm
Photo
D
E
CLAMP1
CLAMP2
M1
LOADINGMOTOR
CXC4659
65PIN:pulldown
TO CN1903
800mA TYP660mA
50mA TYP35mA
X200mA TYP180mA

A B C D E F

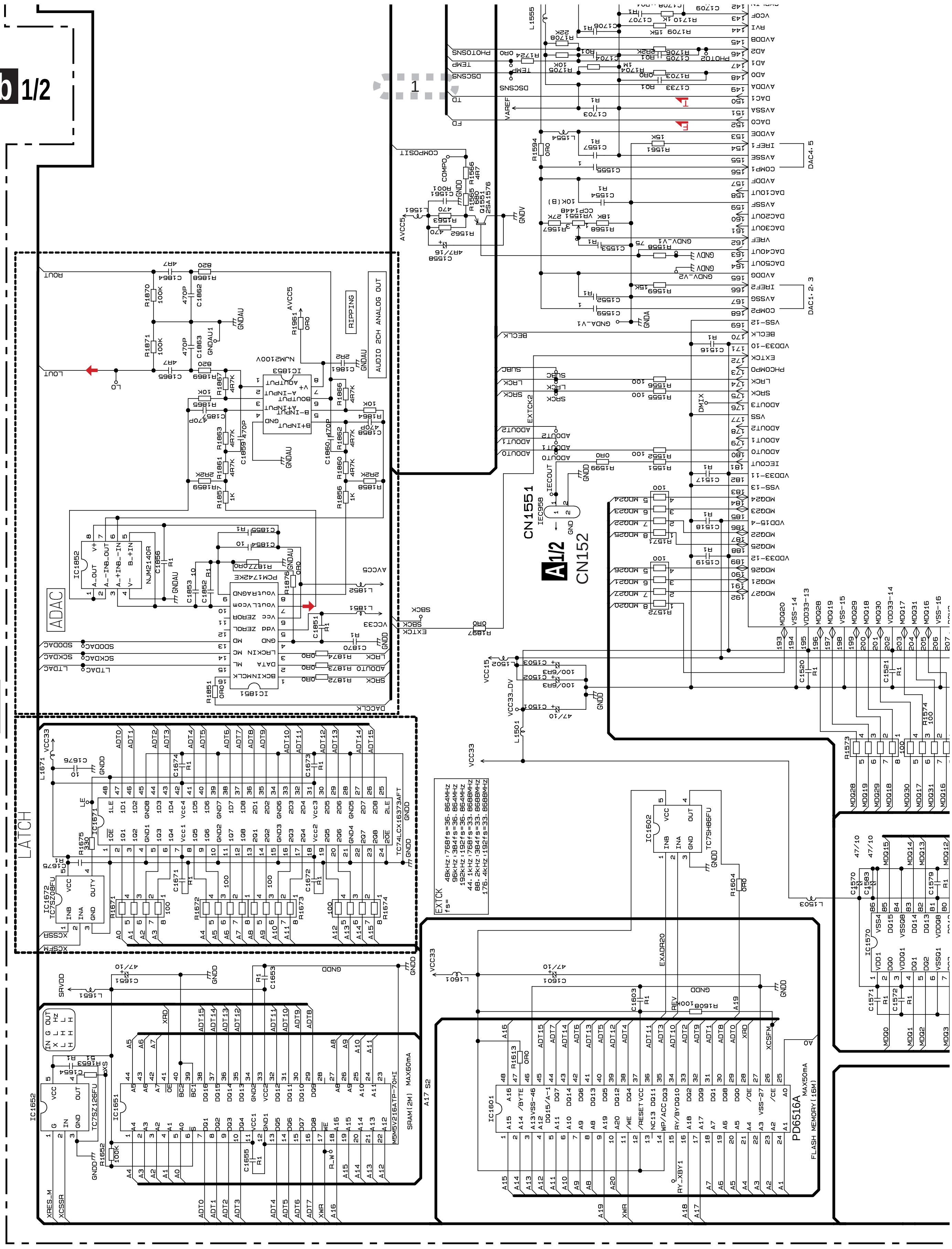
C 1/2

A

C-b 1/2

B

C


ADAC
LATCH
IC1851 PCM1742KE
IC1853 NJM2100V
IC1852 NJM2140R
AUDIO 2CH ANALOG OUT
RIPPING
ROUT
LOUT
IC1671 TC74LCX16373AFT
IC1672 TC7SZ08FU
IC1652 TC7SZ126FU
IC1651 M5M5V216ATP-70HI SRAM(2M) MAX60mA
IC1601 PD6516A FLASH MEMORY(16M) MAX50mA
IC1602 TC7SH86FU
CN1551
A 1/2 CN152
EXTCK fs=
48kHz:768fs=36.864MHz
96kHz:384fs=36.864MHz
192kHz:192fs=36.864MHz
44.1kHz:768fs=33.8688MHz
88.2kHz:384fs=33.8688MHz
176.4kHz:192fs=33.8688MHz
DAC4,5
DAC1,2,3
1

C-a (1/2)
C-b (1/2)

D

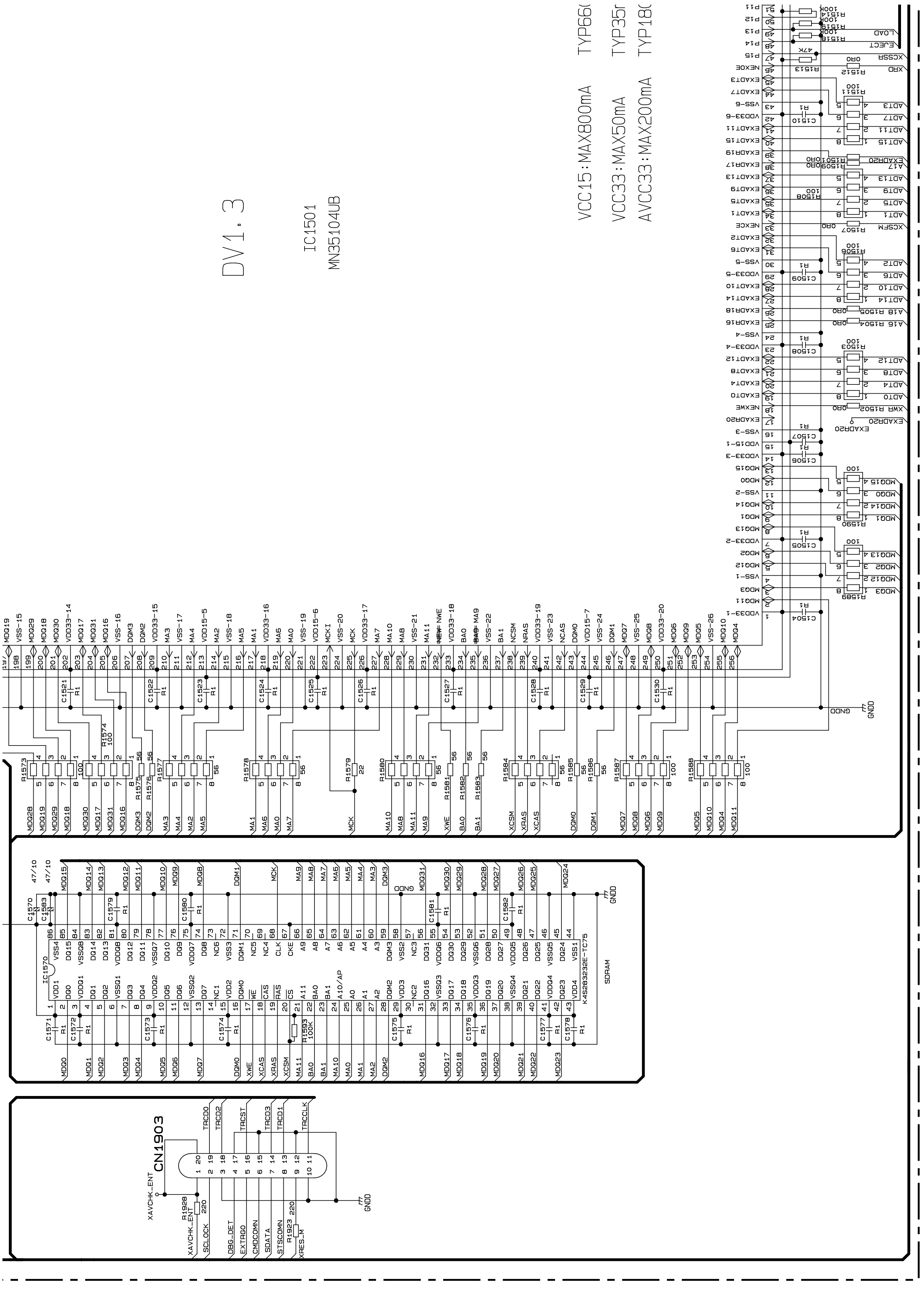
E

F

C-a 1/2

A

C-b 1/2


DV1.3
IC1501
MN35104UB
VCC15:MAX800mA TYP66(
VCC33:MAX50mA TYP35
AVCC33:MAX200mA TYP18(
IC1570
K4S283232E-TC75
SDRAM
CN1903
GNDD
XAVCHK_ENT
R1928 220
SCLOCK
DBG_DET
EXTRGO
CMDCOMN
SDATA
STSCOMN
XRES_M
R1923 220
TRCD0
TRCD2
TRCST
TRCD3
TRCD1
TRCCLK
LOAD
EJECT
XCSSR
XRD
XCSFM
XWR
EXADR20

B

C

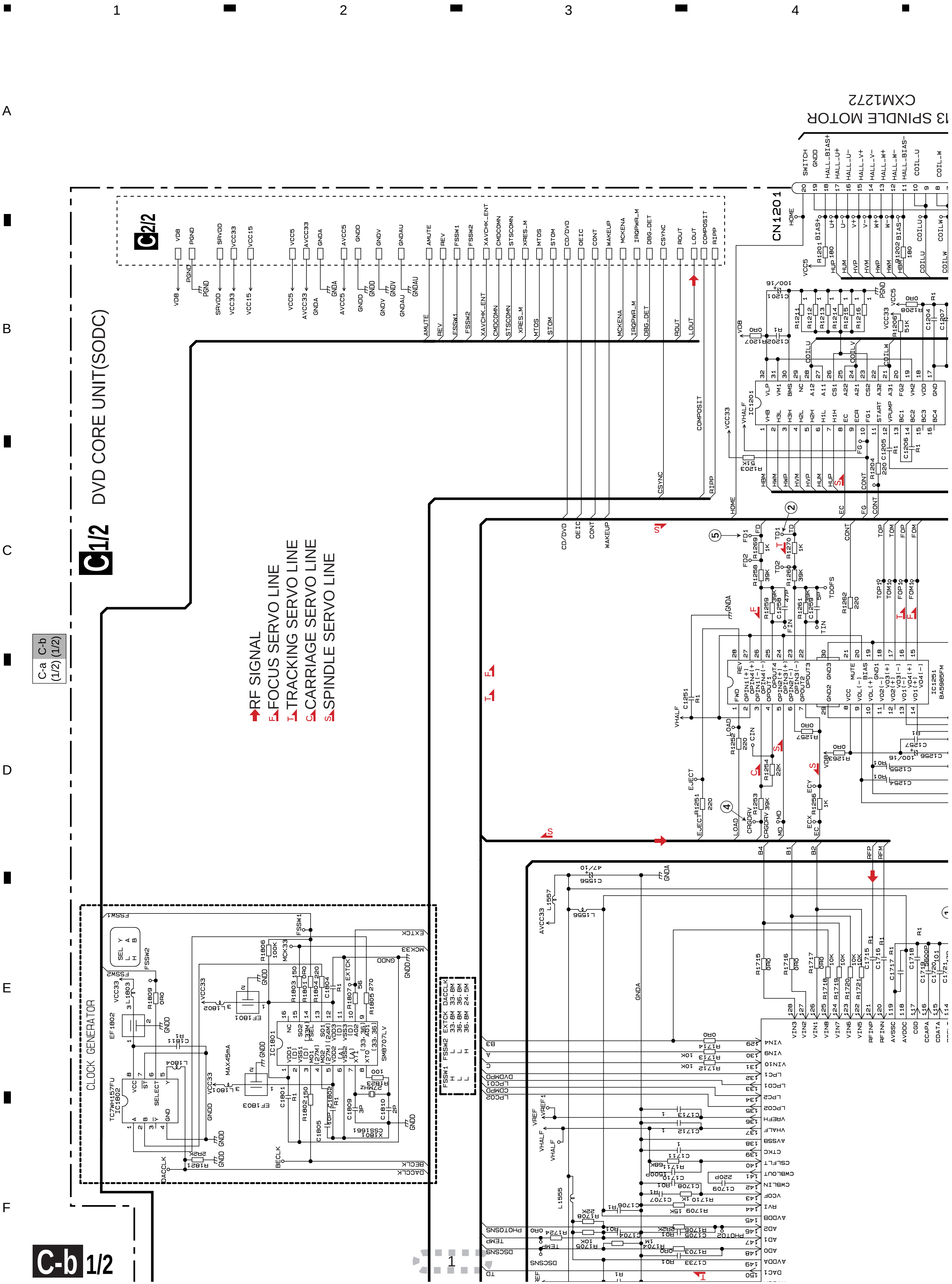
C-a C-b
(1/2) (1/2)

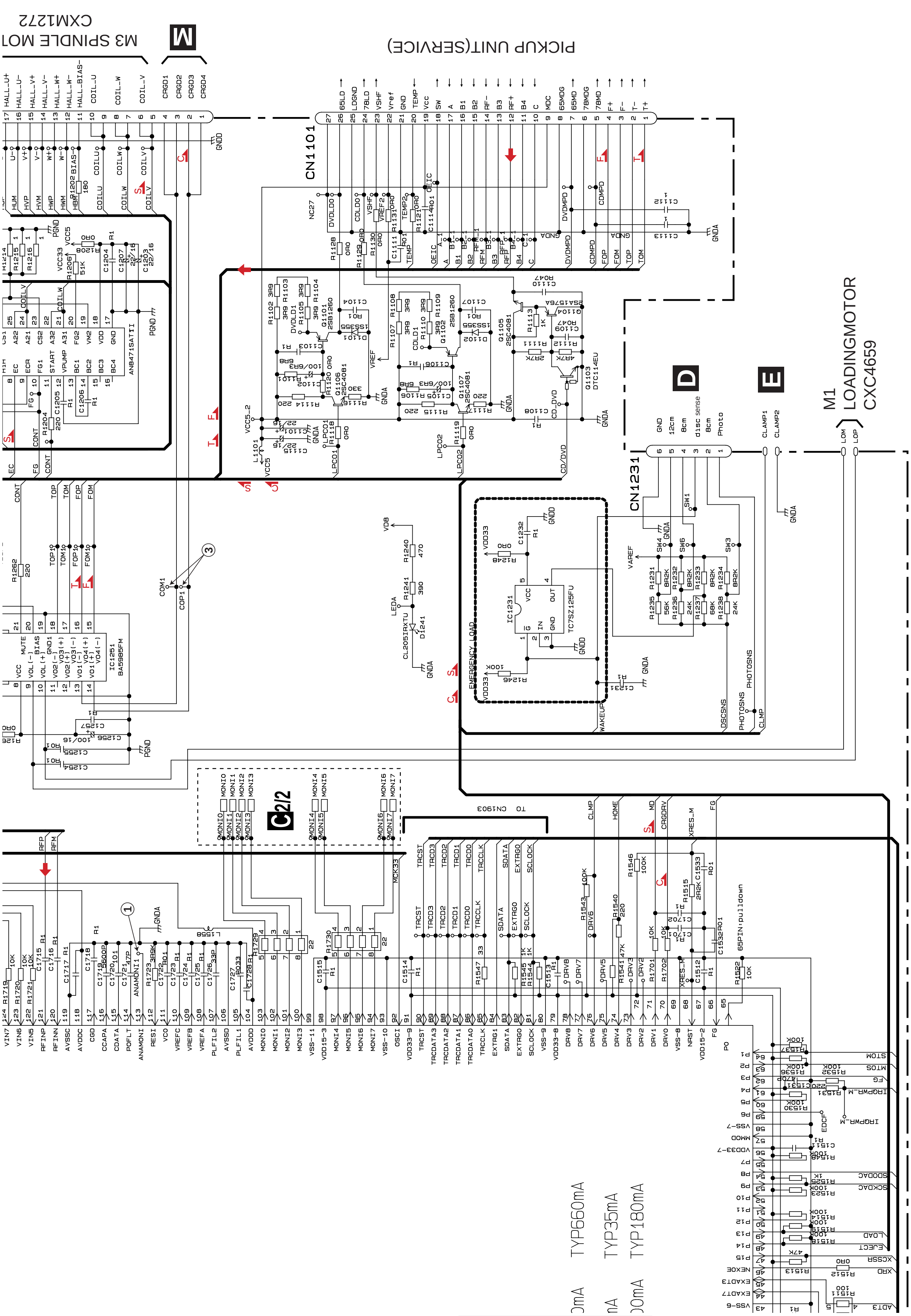
D

E

F

C-a 1/2

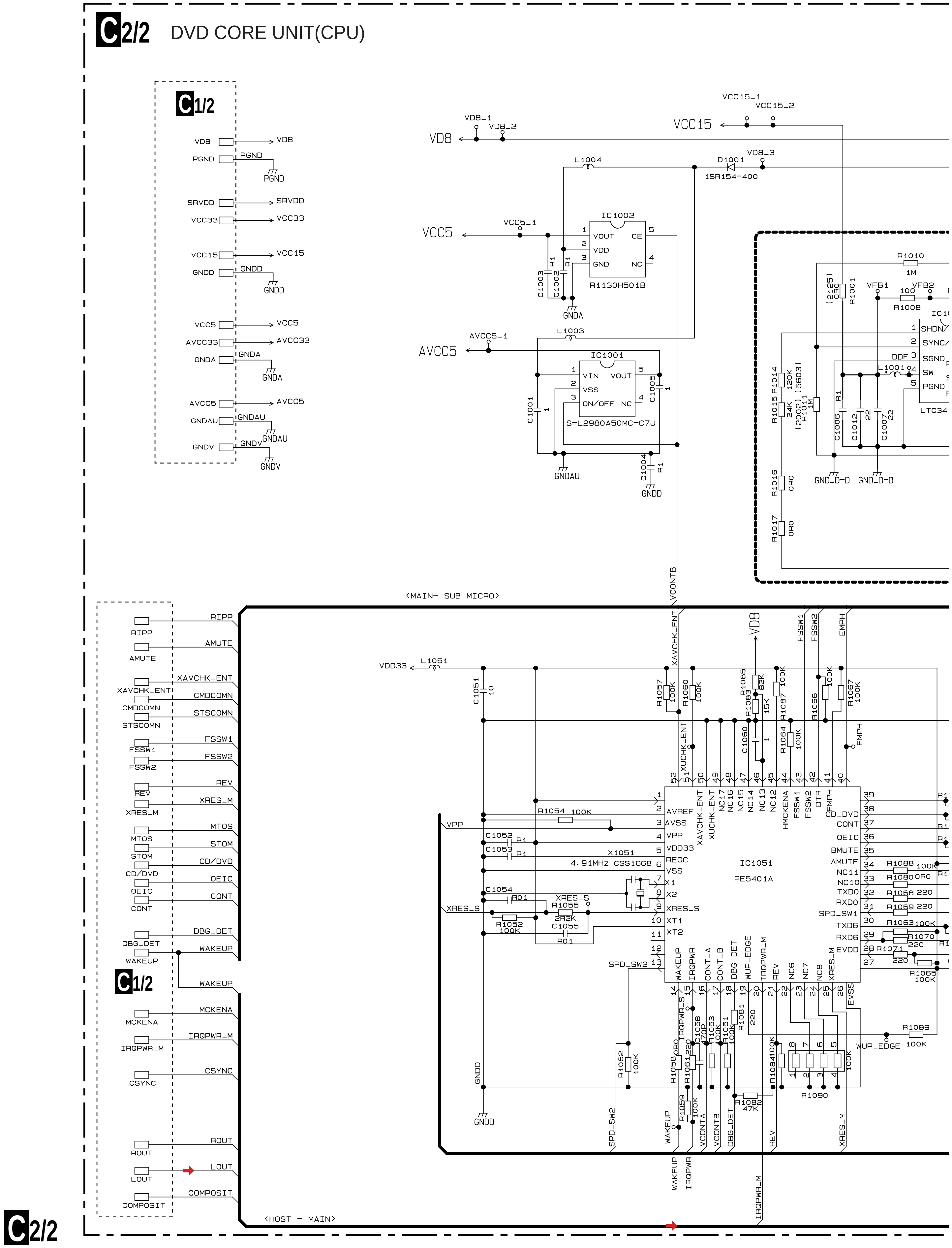

C-b 1/2
C 1/2
DVD CORE UNIT(SODC)
C 2/2
C-a (1/2)
C-b (1/2)
RF SIGNAL
F FOCUS SERVO LINE
T TRACKING SERVO LINE
C CARRIAGE SERVO LINE
S SPINDLE SERVO LINE
CLOCK GENERATOR
IC1802 TC7WH157FU
IC1801 SM8707LV
X1801 CSS1661
EF1802
EF1803
MAX45mA
FSSW1 FSSW2 EXTCK DACCLK
33.8M 33.8M
36.8M 36.8M
36.8M 24.5M
IC1201
IC1251 BA5985FM
CN1201
I3 SPINDLE MOTOR CXM1272
HALL_BIAS+
HALL_U+
HALL_U−
HALL_V+
HALL_V−
HALL_W+
HALL_W−
HALL_BIAS−
COIL_U
COIL_W
SWITCH
GNDD
1
2
3
4
A
B
C
D
E
F

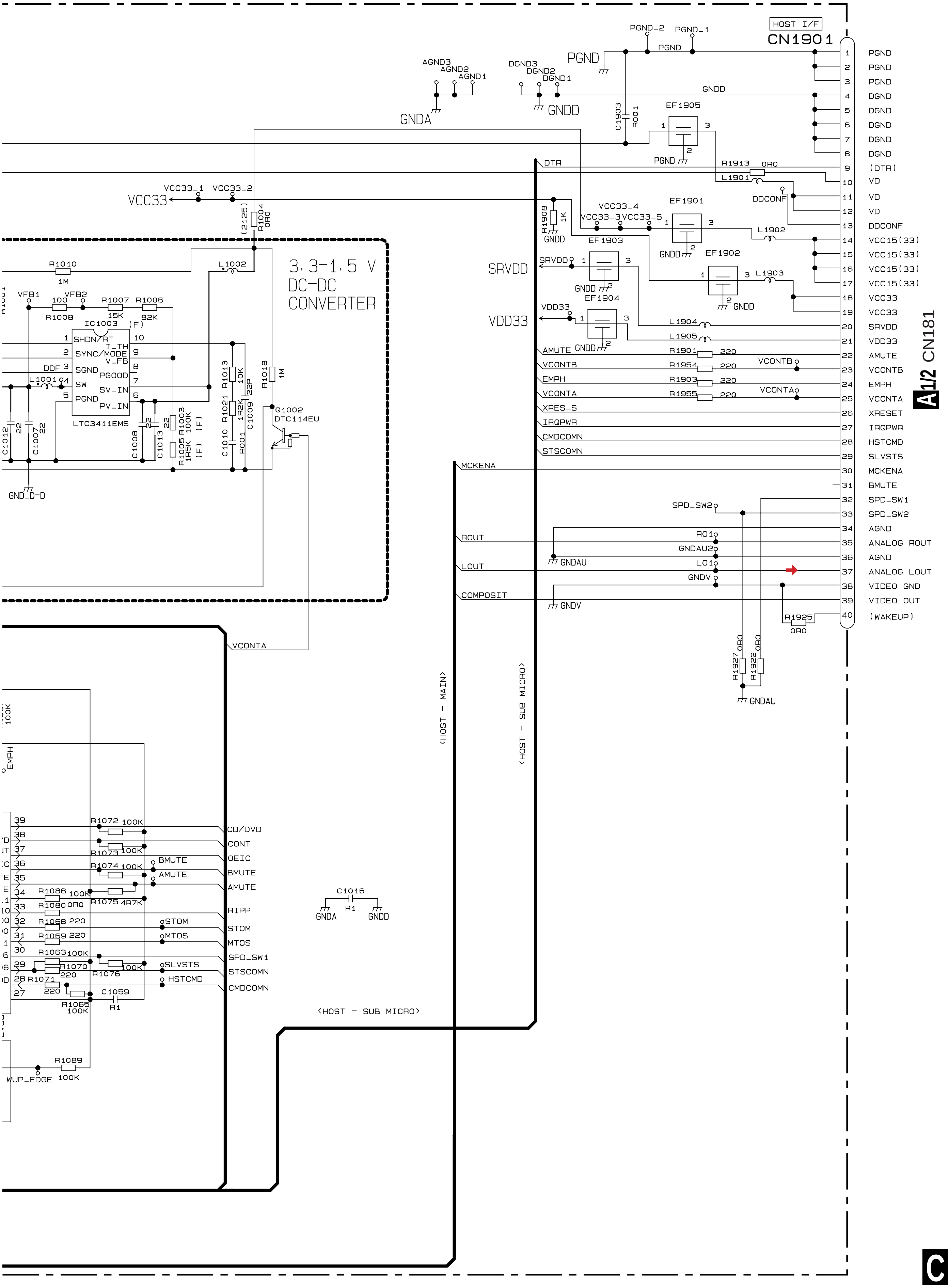


PICKUP UNIT(SERVICE)
M
M3 SPINDLE MOT
CXM1272
CN1101
CN1231
D
E
M1
LOADINGMOTOR
CXC4659
IC1251
BA5985FM
IC1231
TC7SZ125FU
ANB471SATII
Q1101 2SB1260
Q1102 2SB1260
Q1103 DTC114EU
Q1104 2SA1576A
Q1105 2SC4081
Q1106 2SC4081
Q1107 2SC4081
D1241 CL205IRXTU
EMERGENCY LOAD
C2/2
TO CN1903
65PIN:pulldown
TYP660mA
TYP35mA
TYP180mA
C-b 1/2

C-a (1/2) C-b (1/2)

3.7 CD MECHANISM MODULE(CPU)


C 2/2
DVD CORE UNIT(CPU)
C 1/2
VD8
PGND
SRVDD
VCC33
VCC15
GNDD
VCC5
AVCC33
GNDA
AVCC5
GNDAU
GNDV
VD8_1
VD8_2
VD8_3
VCC15_1
VCC15_2
L1004
D1001
1SR154-400
VCC5_1
IC1002
VOUT
CE
VDD
GND
NC
R1130H501B
C1003
C1002
R1
AVCC5_1
L1003
IC1001
VIN
VSS
ON/OFF
C1001
C1005
C1004
S-L2980A50MC-C7J
R1010
1M
R1001
(2125)
0R0
VFB1
VFB2
100
R1008
SHDN
SYNC
DDF
SGND
SW
PGND
L1001
LTC34
R1015
R1014
24K
120K
(2002)
(5603)
R1011
1M
C1006
C1012
C1007
22
GND_D-D
R1016
R1017
0R0
VCONTB
<MAIN- SUB MICRO>
RIPP
AMUTE
XAVCHK_ENT
CMDCOMN
STSCOMN
FSSW1
FSSW2
REV
XRES_M
MTOS
STOM
CD/DVD
OEIC
CONT
DBG_DET
WAKEUP
MCKENA
IRQPWR_M
CSYNC
ROUT
LOUT
COMPOSIT
VDD33
L1051
C1051
10
R1057
R1050
100K
R1085
82K
R1083
15K
R1087
R1066
R1067
EMPH
C1060
R1064
XUCHK_ENT
R1054
VPP
C1052
C1053
X1051
4.91MHz CSS1668
C1054
R01
XRES_S
R1055
2R2K
C1055
R1052
AVREF
AVSS
REGC
X1
X2
XT1
XT2
IC1051
PE5401A
CD_DVD
BMUTE
NC11
NC10
TXD0
RXD0
SPD_SW1
TXD6
RXD6
EVDD
R1088
R1080
R1068
220
R1069
R1063
R1070
R1071
R1065
R1089
WUP_EDGE
HMCKENA
DTR
NC17
NC16
NC15
NC14
NC13
NC12
NC6
NC7
NC8
EVSS
IRQPWR
CONT_A
CONT_B
SPD_SW2
R1062
R1058
R1061
C1058
10P
R1053
R1051
R1081
R1084
R1082
47K
R1059
R1090
GNDD
VCONTA
<HOST - MAIN>


HOST I/F
CN1901
PGND_2
PGND_1
PGND
AGND3
AGND2
AGND1
DGND3
DGND2
DGND1
GNDA
GNDD
C1903
R001
EF1905
DTR
R1913 0R0
L1901
VCC33_1
VCC33_2
VCC33
(2125)
R1004 0R0
R1908 1K
DDCONF
VCC33_4
VCC33_3
VCC33_5
EF1901
EF1903
L1902
EF1902
L1903
SRVDD
VDD33
EF1904
L1904
L1905
AMUTE
VCONTB
EMPH
VCONTA
XRES_S
IRQPWR
CMDCOMN
STSCOMN
R1901 220
R1954 220
R1903 220
R1955 220
MCKENA
ROUT
LOUT
COMPOSIT
SPD_SW2
R01
GNDAU2
L01
GNDV
GNDAU
R1925 0R0
R1927 0R0
R1922 0R0
3.3-1.5 V DC-DC CONVERTER
R1010 1M
L1002
VFB1
VFB2
R1008 100
R1007 15K
R1006 82K
IC1003 (F)
SHDN/RT
SYNC/MODE
I_TH
V_FB
SGND
PGOOD
SW
SV_IN
PGND
PV_IN
LTC3411EMS
DDF
L1001
C1012 22
C1007 22
C1008
C1013 22
R1005 1R5K (F)
R1003 100K (F)
R1013 10K
R1021 1R2K
C1010
R001
C1009 22P
R1018 1M
Q1002 DTC114EU
GND_D-D
VCONTA
1 PGND
2 PGND
3 PGND
4 DGND
5 DGND
6 DGND
7 DGND
8 DGND
9 (DTR)
10 VD
11 VD
12 VD
13 DDCONF
14 VCC15(33)
15 VCC15(33)
16 VCC15(33)
17 VCC15(33)
18 VCC33
19 VCC33
20 SRVDD
21 VDD33
22 AMUTE
23 VCONTB
24 EMPH
25 VCONTA
26 XRESET
27 IRQPWR
28 HSTCMD
29 SLVSTS
30 MCKENA
31 BMUTE
32 SPD_SW1
33 SPD_SW2
34 AGND
35 ANALOG ROUT
36 AGND
37 ANALOG LOUT
38 VIDEO GND
39 VIDEO OUT
40 (WAKEUP)
A 1/2 CN181
(HOST - MAIN)
(HOST - SUB MICRO)
R1072 100K
R1073 100K
R1074 100K
R1075 4R7K
R1088 100K
R1080 0R0
R1068 220
R1069 220
R1063 100K
R1070 220
R1076 100K
R1071 220
R1065 100K
C1059 R1
R1089 100K
WUP_EDGE
BMUTE
AMUTE
STOM
MTOS
SLVSTS
HSTCMD
CD/DVD
CONT
OEIC
BMUTE
AMUTE
RIPP
STOM
MTOS
SPD_SW1
STSCOMN
CMDCOMN
C1016 R1
GNDA
GNDD
(HOST - SUB MICRO)
100K
EMPH

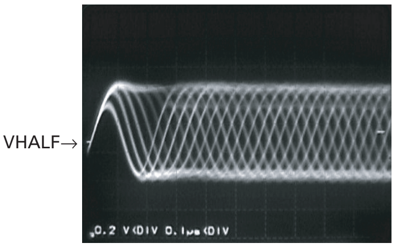
A
B
C
D
E
F

C 2/2

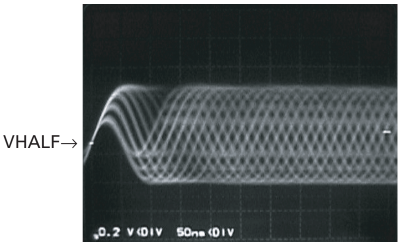
Waveforms

Note:1. The encircled number denote measuring pointes in the circuit diagram.
2. Reference voltage VHALF : 1.65V(TD1,FD1,CRGDRV)
: 2V Center(ANAMONI1)
In this waveform, it is seeing on the GND standard.
Offset of 1.65V or 2V is put in.

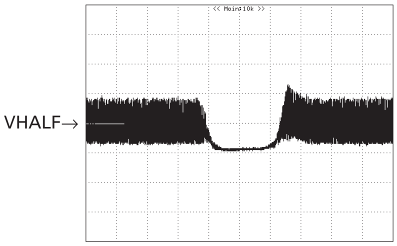
① ANAMONI1 0.2V/div. 0.1μs/div.
CDRF



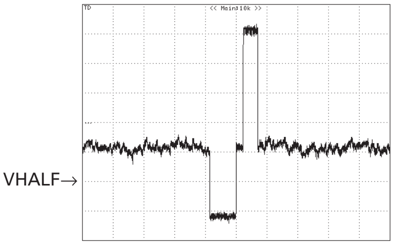
① ANAMONI1 0.2V/div. 0.1μs/div.
DVDRF



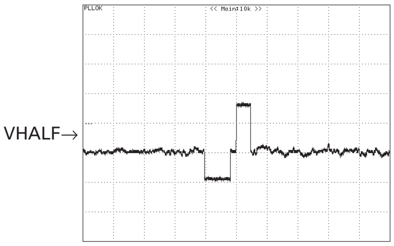
① ANAMONI1 0.5V/div. 100μs/div.
DVDRF(BD1mm)



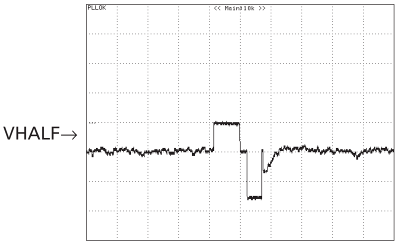
② TD1 0.2V/div. 100μs/div.
Interval



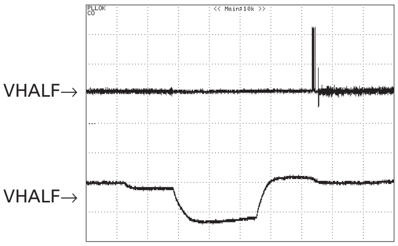
② TD1 0.5V/div. 100μs/div.
Interval FWD



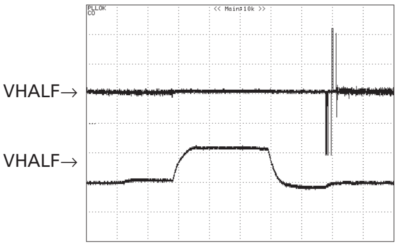
② TD1 0.5V/div. 100μs/div.
Interval REV



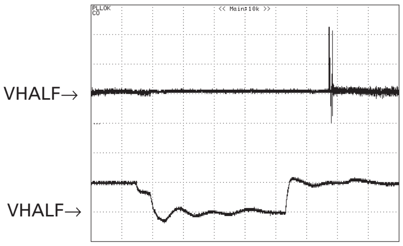
② CH1: TD1 0.5V/div.5ms/div.
③ CH2: COP1-COM1 2.0V/div.5ms/div.
Traverse501FWD



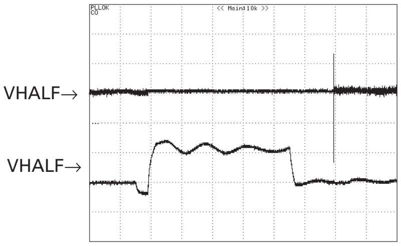
② CH1: TD1 0.5V/div.5ms/div.
③ CH2: COP1-COM1 2.0V/div.5ms/div.
Traverse501REV



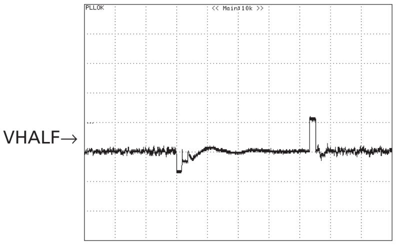
② CH1: TD1 0.5V/div.5ms/div.
③ CH2: COP1-COM1 2.0V/div.5ms/div.
Traverse5000FWD



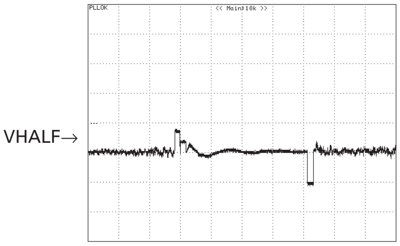
② CH1: TD1 0.5V/div.5ms/div.
③ CH2: COP1-COM1 2.0V/div.5ms/div.
Traverse5000REV



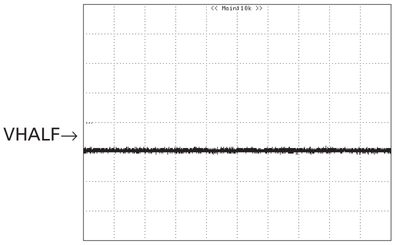
② TD1 0.5V/div.500µs/div.
Multi 32FWD



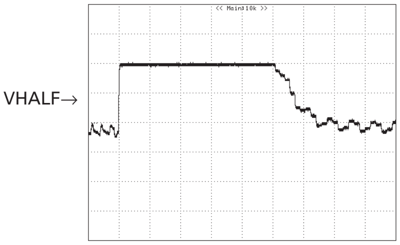
② TD1 0.5V/div.500µs/div.
Multi 32REV



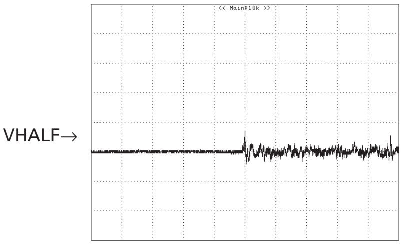
② TD1 0.5V/div.20ms/div.
Play TD



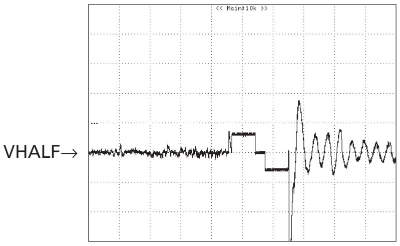
④ CRGPRV 0.5V/div. 100µs/div.
ID search Insaide → Outside



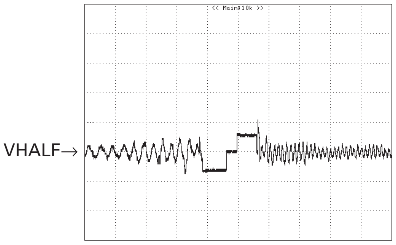
⑤ FD1 0.5V/div. 1ms/div.
Focus close



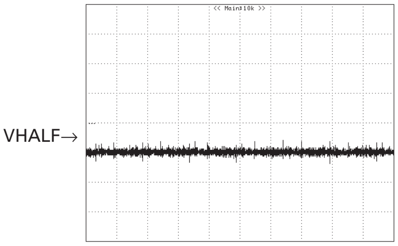
⑤ FD1 0.5V/div.500µs/div.
Focus jamp L 0 → L1



⑤ FD1 0.5V/div.500µs/div.
Focus jamp L1 → L 0

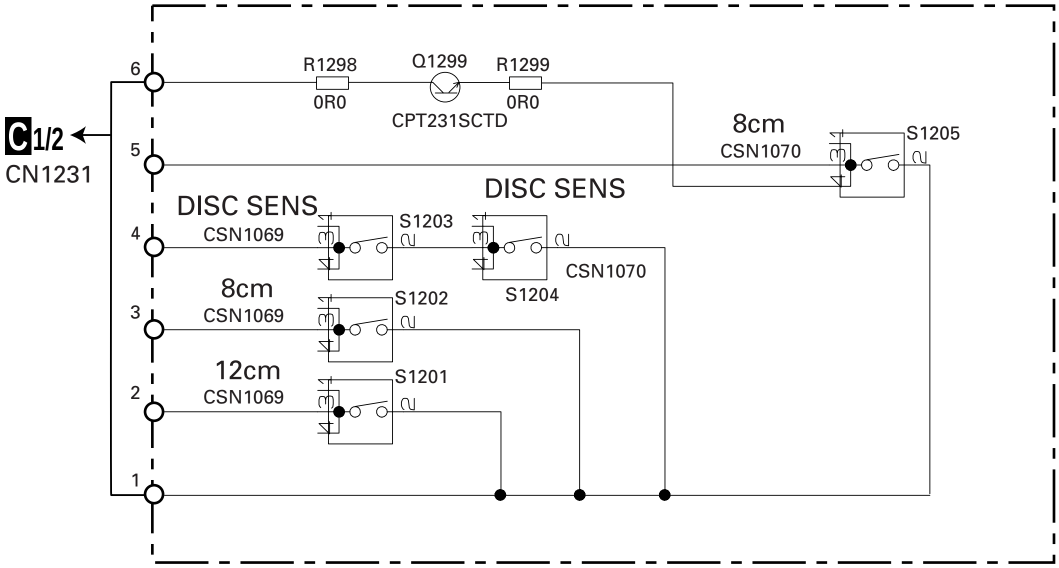


⑤ FD1 0.5V/div.20ms/div.
Play TD

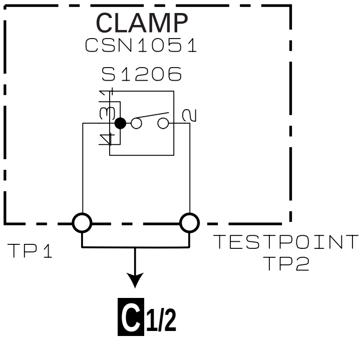


3.8 COMPOUND UNIT(A), COMPOUND UNIT(B) AND RELAY PCB

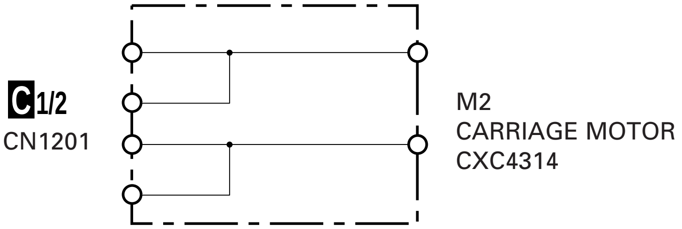
D COMPOUND UNIT(A)


C 1/2
CN1231
6
5
4
3
2
1
R1298
0R0
Q1299
CPT231SCTD
R1299
0R0
8cm
CSN1070
S1205
DISC SENS
CSN1069
S1203
DISC SENS
S1204
CSN1070
8cm
CSN1069
S1202
12cm
CSN1069
S1201

E COMPOUND UNIT(B)

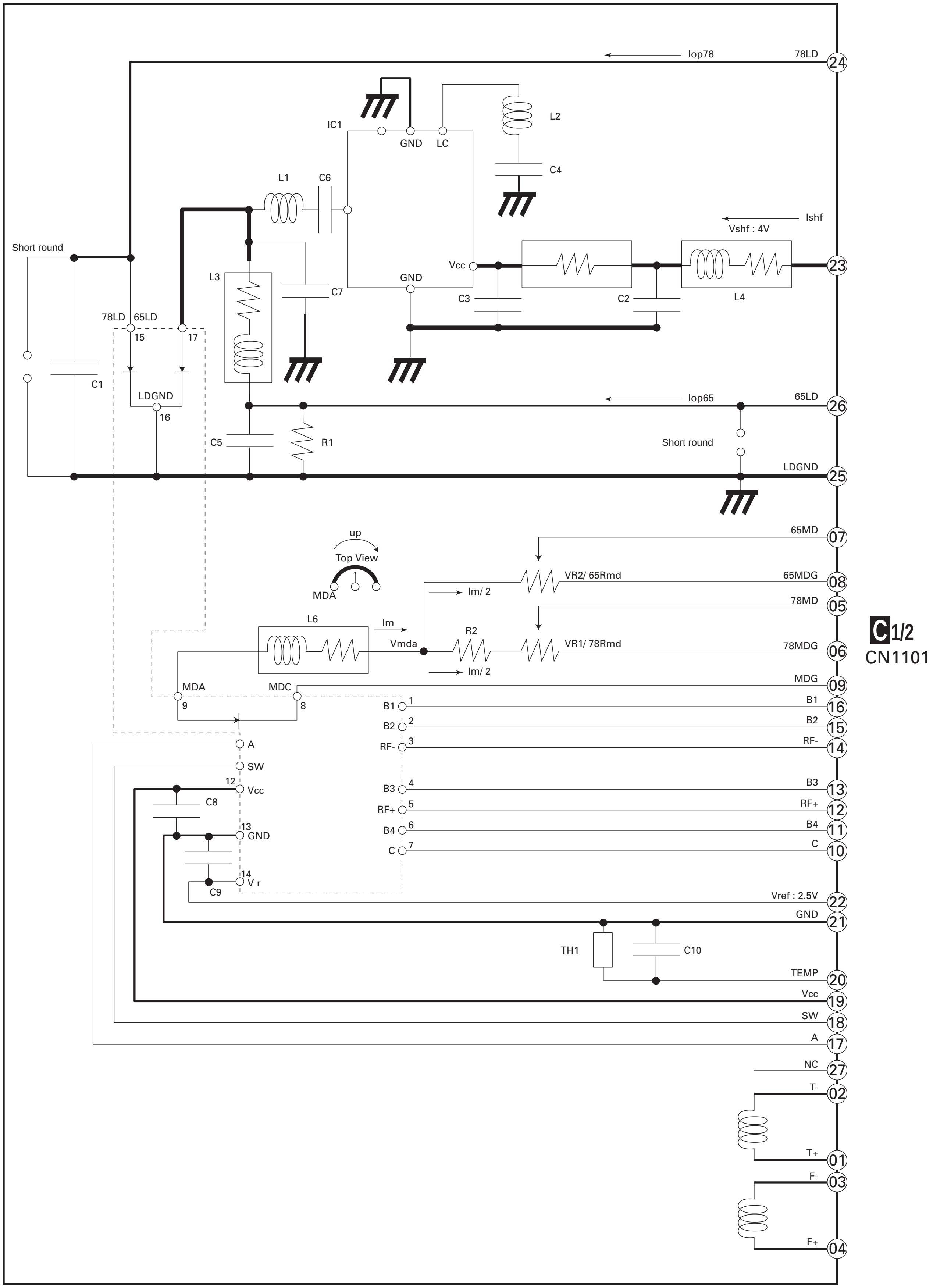

CLAMP
CSN1051
S1206
TP1
TESTPOINT
TP2
C 1/2

M RELAY PCB


C 1/2
CN1201
M2
CARRIAGE MOTOR
CXC4314

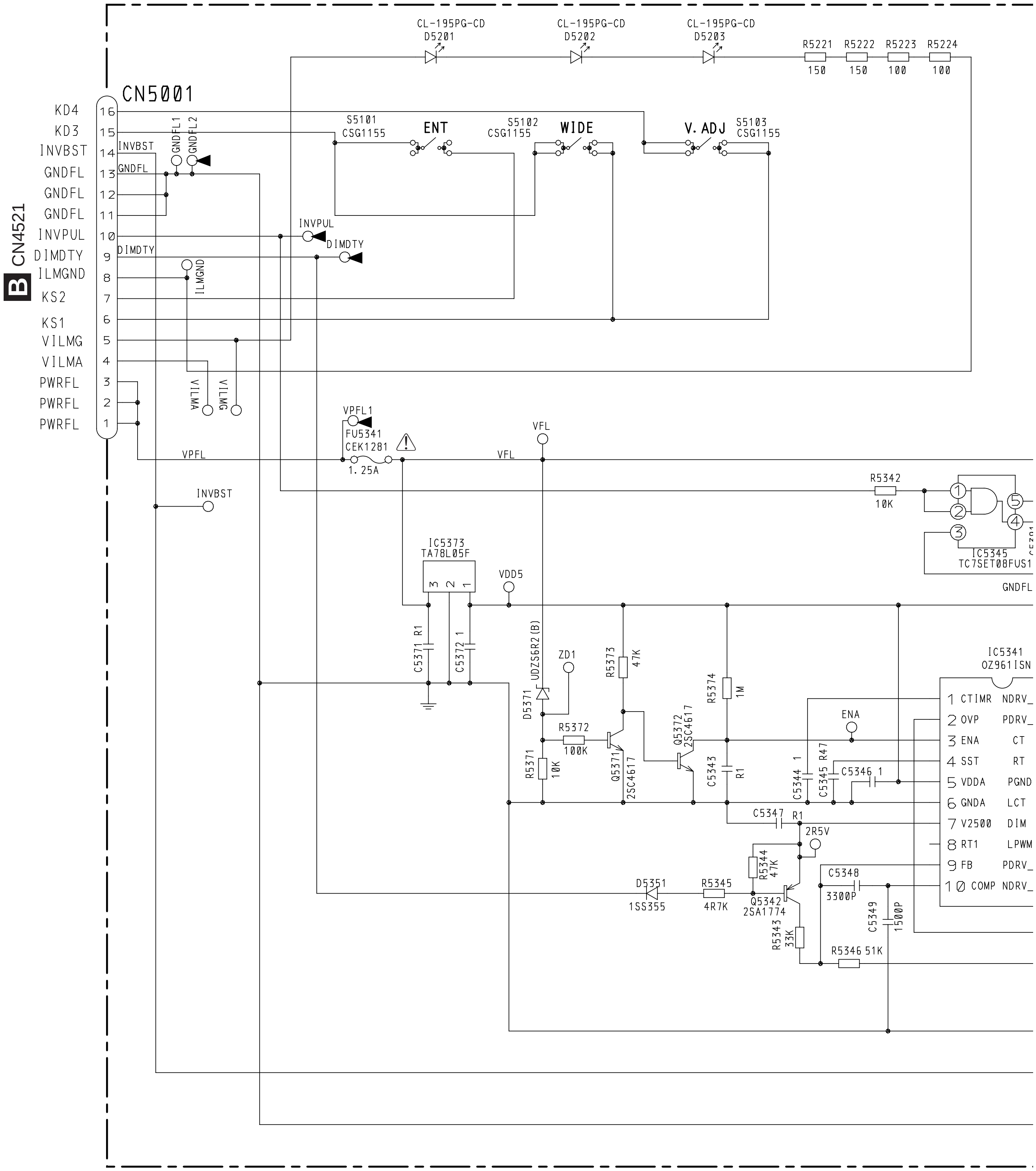
D E M

3.9 PU UNIT(REFERENCE)

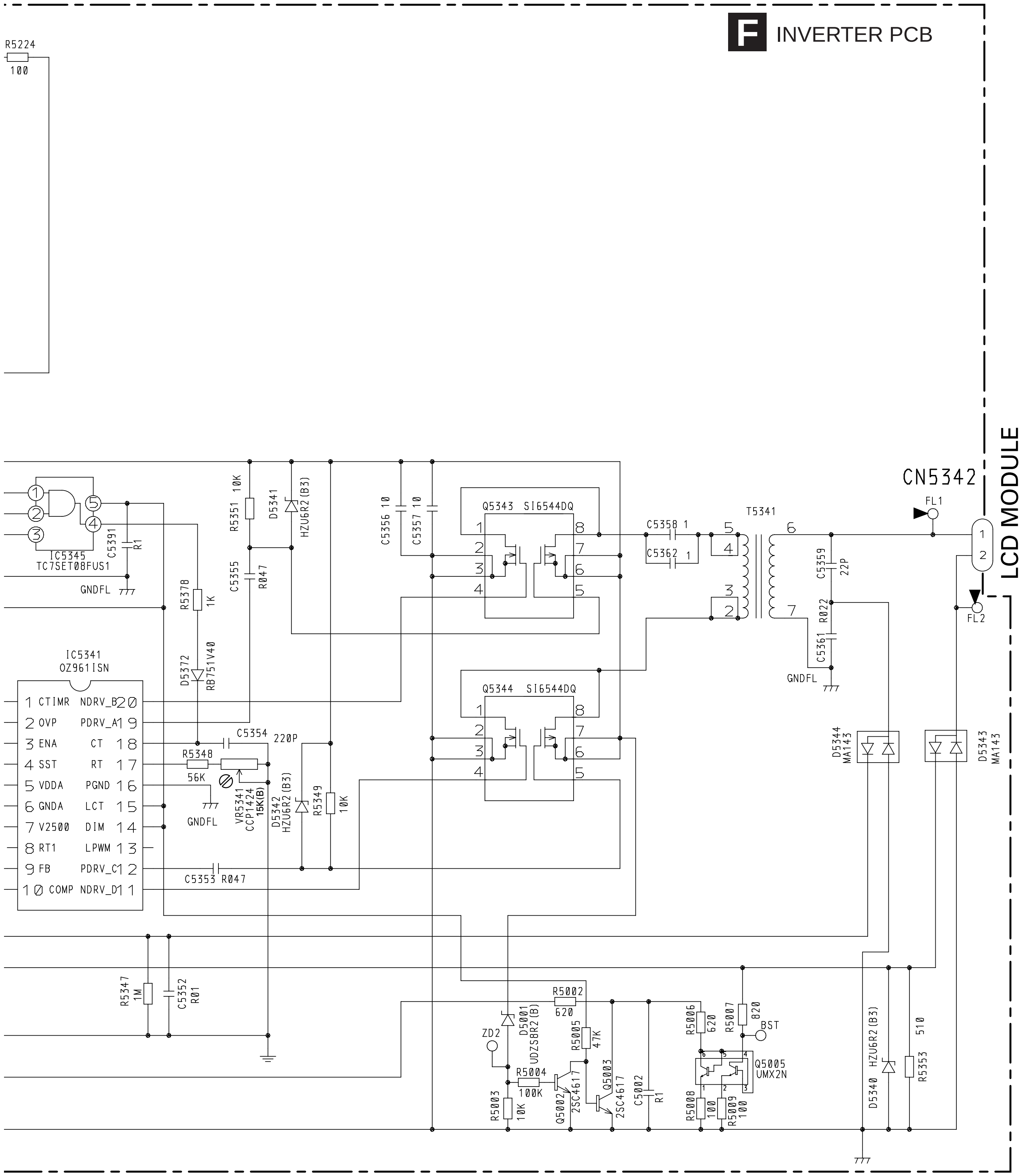


Iop78
78LD
24
IC1
GND
LC
L2
C4
L1
C6
Ishf
Vshf : 4V
Short round
Vcc
GND
23
L3
C7
C3
C2
L4
78LD
65LD
15
17
C1
LDGND
16
Iop65
65LD
26
C5
R1
Short round
LDGND
25
up
Top View
MDA
65MD
07
VR2/ 65Rmd
65MDG
08
Im/ 2
78MD
05
L6
Im
R2
Vmda
VR1/ 78Rmd
78MDG
06
Im/ 2
C1/2
CN1101
MDA
MDC
MDG
09
9
8
B1
1
B1
16
B2
2
B2
15
RF-
3
RF-
14
A
SW
12
Vcc
B3
4
B3
13
C8
RF+
5
RF+
12
13
GND
B4
6
B4
11
C
7
C
10
14
V r
C9
Vref : 2.5V
22
GND
21
TH1
C10
TEMP
20
Vcc
19
SW
18
A
17
NC
27
T-
02
T+
01
F-
03
F+
04

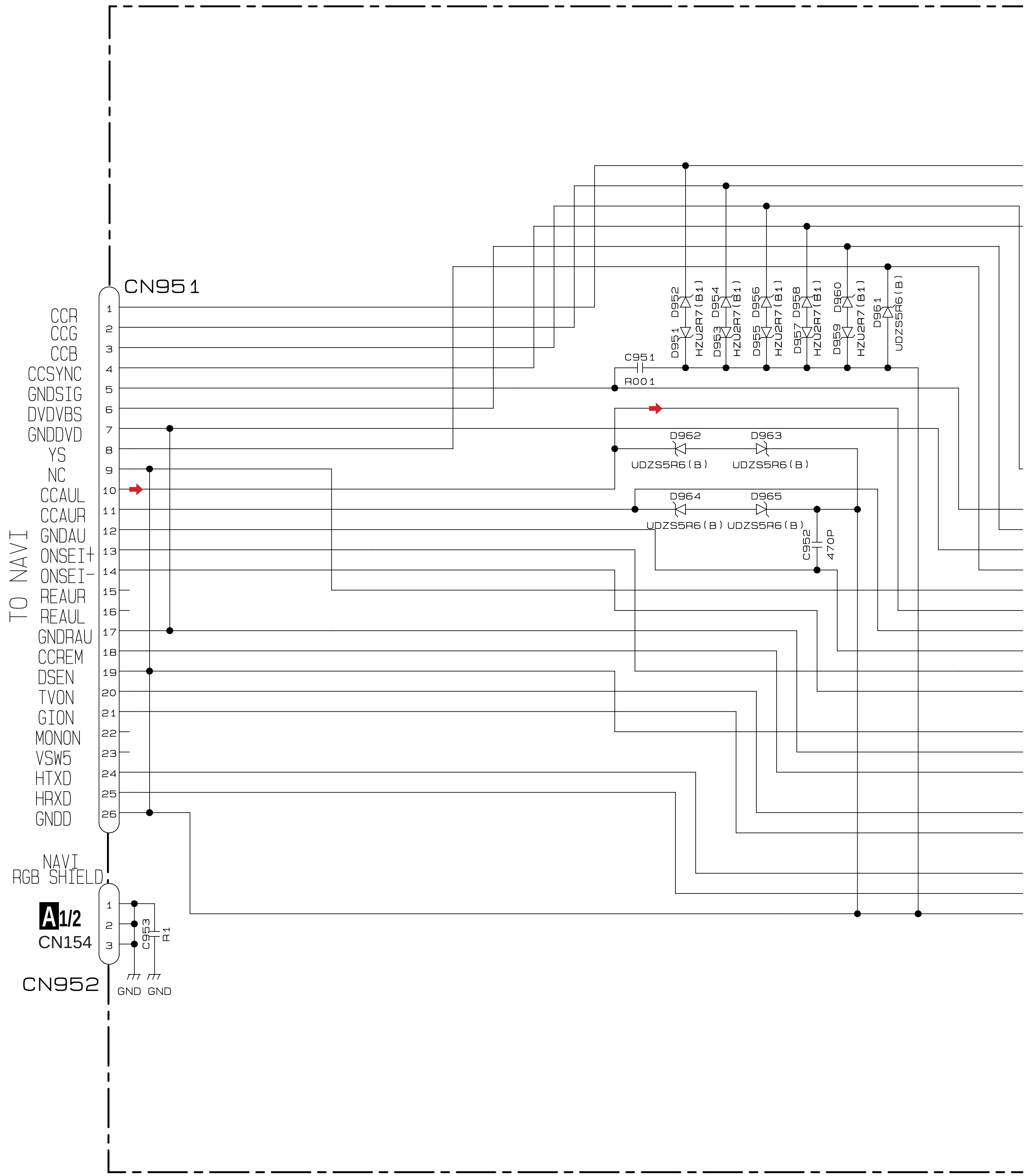
3.10 INVERTER PCB

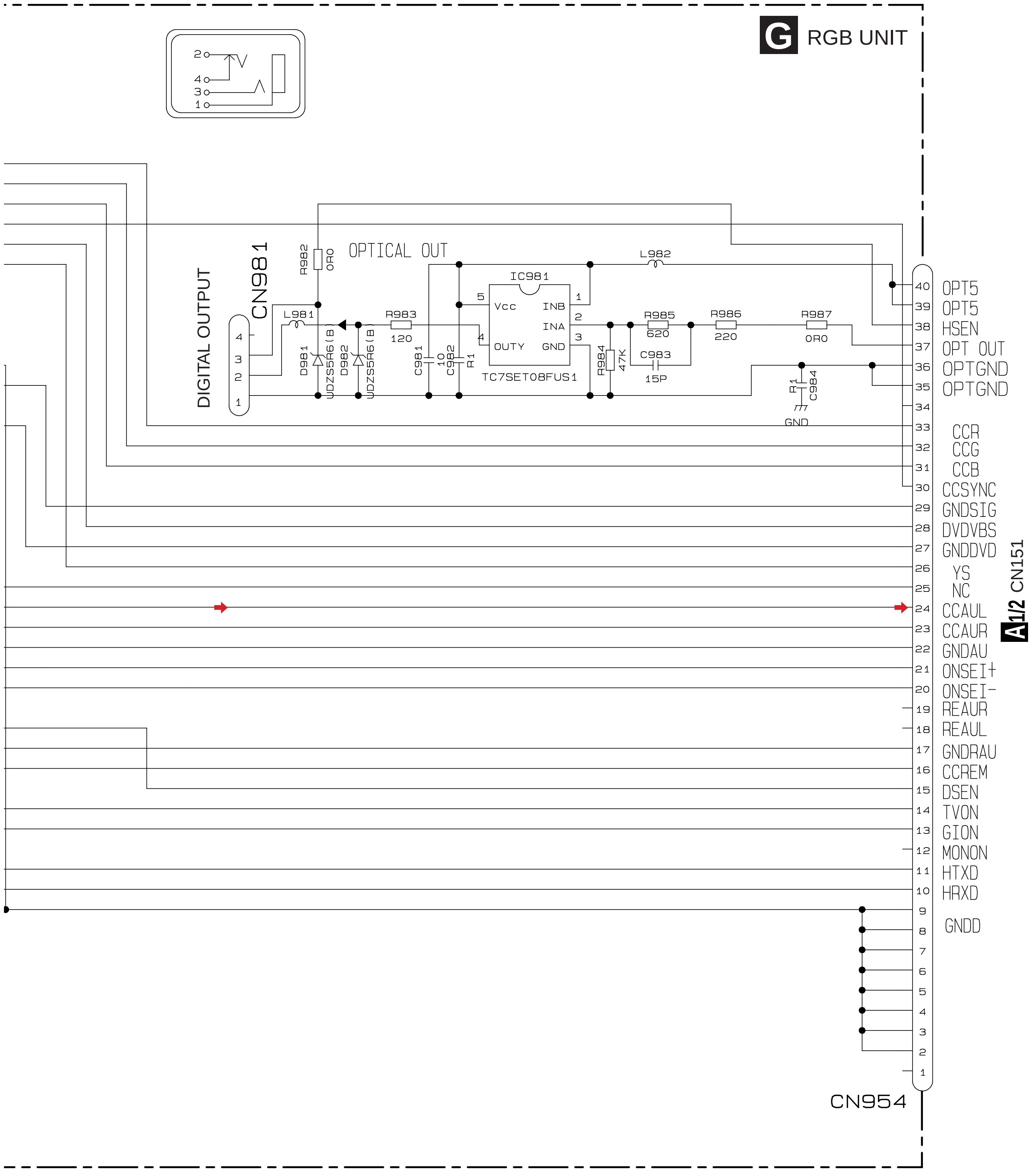

B
CN4521
CN5001
KD4 16
KD3 15
INVBST 14
GNDFL 13
GNDFL 12
GNDFL 11
INVPUL 10
DIMDTY 9
ILMGND 8
KS2 7
KS1 6
VILMG 5
VILMA 4
PWRFL 3
PWRFL 2
PWRFL 1
INVBST
GNDFL
GNDFL1
GNDFL2
DIMDTY
ILMGND
VILMA
VILMG
INVPUL
DIMDTY
CL-195PG-CD
D5201
CL-195PG-CD
D5202
CL-195PG-CD
D5203
R5221 150
R5222 150
R5223 100
R5224 100
S5101 CSG1155
ENT
S5102 CSG1155
WIDE
V. ADJ
S5103 CSG1155
VPFL1
FU5341
CEK1281
1. 25A
VPFL
VFL
VFL
INVBST
R5342 10K
IC5345
TC7SET08FUS1
GNDFL
IC5373
TA78L05F
3 2 1
VDD5
C5371 R1
C5372 1
UDZS6R2(B)
D5371
ZD1
R5373 47K
R5374 1M
R5372 100K
R5371 10K
Q5371 2SC4617
Q5372 2SC4617
C5343 R1
ENA
C5344 1
C5345 R47
C5346 1
C5347 R1
2R5V
IC5341
OZ9611SN
1 CTIMR NDRV_
2 OVP PDRV_
3 ENA CT
4 SST RT
5 VDDA PGND
6 GNDA LCT
7 V2500 DIM
8 RT1 LPWM
9 FB PDRV_
10 COMP NDRV_
R5344 47K
C5348 3300P
D5351 1SS355
R5345 4R7K
Q5342 2SA1774
C5349 1500P
R5343 33K
R5346 51K

MONITOR UNIT
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB

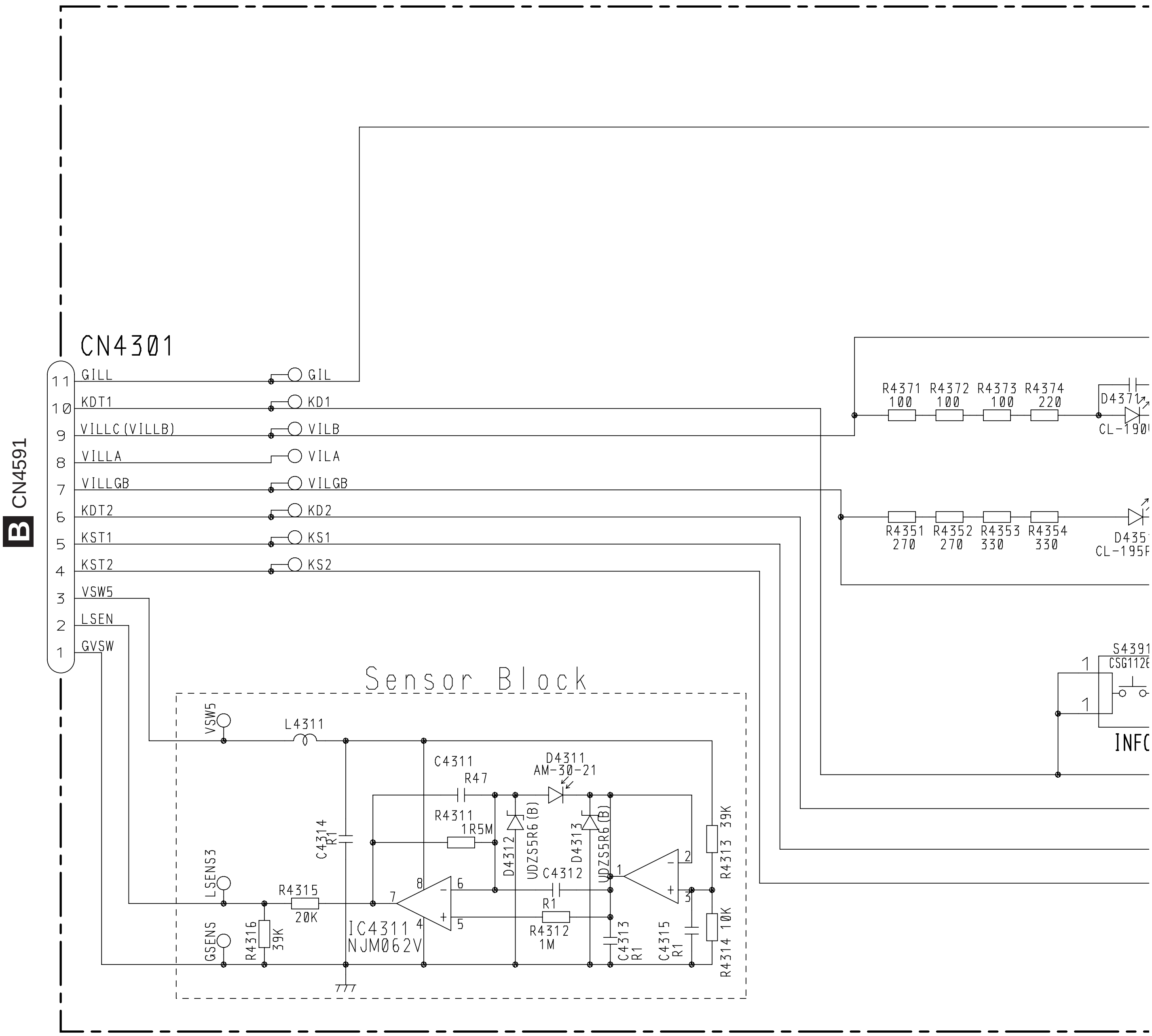

F INVERTER PCB
LCD MODULE
R5224
100
IC5345
TC7SET08FUS1
C5391
R1
GNDFL
R5378
1K
D5372
RB751V40
R5351
10K
C5355
R047
D5341
HZU6R2(B3)
C5356 10
C5357 10
Q5343 SI6544DQ
Q5344 SI6544DQ
C5358 1
C5362 1
T5341
CN5342
FL1
FL2
C5359
22P
R022
C5361
GNDFL
IC5341
OZ9611SN
1 CTIMR NDRV_B 20
2 OVP PDRV_A 19
3 ENA CT 18
4 SST RT 17
5 VDDA PGND 16
6 GNDA LCT 15
7 V2500 DIM 14
8 RT1 LPWM 13
9 FB PDRV_C 12
10 COMP NDRV_D 11
C5354
220P
R5348
56K
VR5341
CCP1424
15K(B)
GNDFL
D5342
HZU6R2(B3)
R5349
10K
C5353 R047
D5344
MA143
D5343
MA143
R5347
1M
C5352
R01
R5002
620
R5005
47K
D5001
UDZS8R2(B)
ZD2
R5004
100K
R5003
10K
Q5002
2SC4617
Q5003
2SC4617
C5002
R1
R5006
620
R5007
820
BST
Q5005
UMX2N
R5008
100
R5009
100
D5340
HZU6R2(B3)
R5353
510

3.11 RGB UNIT


CN951
TO NAVI
1 CCR
2 CCG
3 CCB
4 CCSYNC
5 GNDSIG
6 DVDVBS
7 GNDDVD
8 YS
9 NC
10 CCAUL
11 CCAUR
12 GNDAU
13 ONSEI+
14 ONSEI-
15 REAUR
16 REAUL
17 GNDRAU
18 CCREM
19 DSEN
20 TVON
21 GION
22 MONON
23 VSW5
24 HTXD
25 HRXD
26 GNDD
D951 D952 HZU2R7(B1)
D953 D954 HZU2R7(B1)
D955 D956 HZU2R7(B1)
D957 D958 HZU2R7(B1)
D959 D960 HZU2R7(B1)
D961 UDZS5R6(B)
C951
R001
D962 UDZS5R6(B)
D963 UDZS5R6(B)
D964 UDZS5R6(B)
D965 UDZS5R6(B)
C952 470P
NAVI RGB SHIELD
A1/2
CN154
1
2
3
C953
R1
GND
GND
CN952

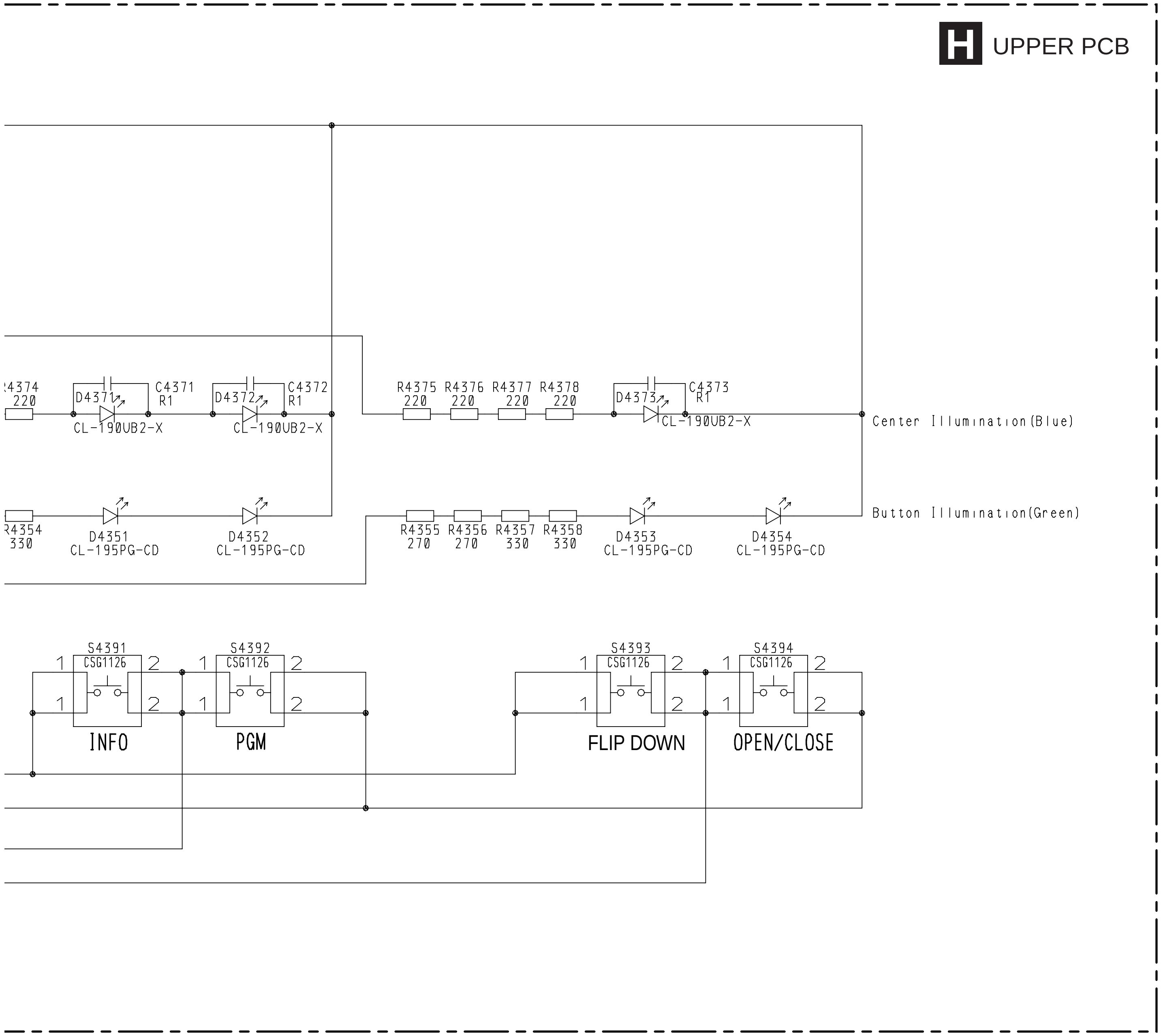

G RGB UNIT
2
4
3
1
DIGITAL OUTPUT
CN981
4
3
2
1
L981
R982
0R0
OPTICAL OUT
D981
UDZS5R6(B)
D982
UDZS5R6(B)
R983
120
C981
10
C982
R1
IC981
5
Vcc
INB
1
INA
2
4
OUTY
GND
3
TC7SET08FUS1
L982
R984
47K
R985
620
C983
15P
R986
220
R987
0R0
R1
C984
GND
40 OPT5
39 OPT5
38 HSEN
37 OPT OUT
36 OPTGND
35 OPTGND
34
33 CCR
32 CCG
31 CCB
30 CCSYNC
29 GNDSIG
28 DVDVBS
27 GNDDVD
26 YS
25 NC
24 CCAUL
23 CCAUR
22 GNDAU
21 ONSEI+
20 ONSEI-
19 REAUR
18 REAUL
17 GNDRAU
16 CCREM
15 DSEN
14 TVON
13 GION
12 MONON
11 HTXD
10 HRXD
9 GNDD
8
7
6
5
4
3
2
1
CN954
A 1/2 CN151

3.12 UPPER PCB


CN4301
B CN4591
11 GILL
10 KDT1
9 VILLC(VILLB)
8 VILLA
7 VILLGB
6 KDT2
5 KST1
4 KST2
3 VSW5
2 LSEN
1 GVSW
GIL
KD1
VILB
VILA
VILGB
KD2
KS1
KS2
R4371 100
R4372 100
R4373 100
R4374 220
D4371
CL-190
R4351 270
R4352 270
R4353 330
R4354 330
D435
CL-195
S4391
CSG112
1
1
INF
Sensor Block
VSW5
L4311
C4311
R47
D4311
AM-30-21
R4311
1R5M
C4314
R1
D4312
UDZS5R6(B)
D4313
UDZS5R6(B)
C4312
R1
R4313 39K
LSENS3
R4315
20K
IC4311
NJM062V
8
7
6
5
4
1
2
3
R4312
1M
GSENS
R4316
39K
C4313
R1
C4315
R1
R4314 10K

MONITOR UNIT

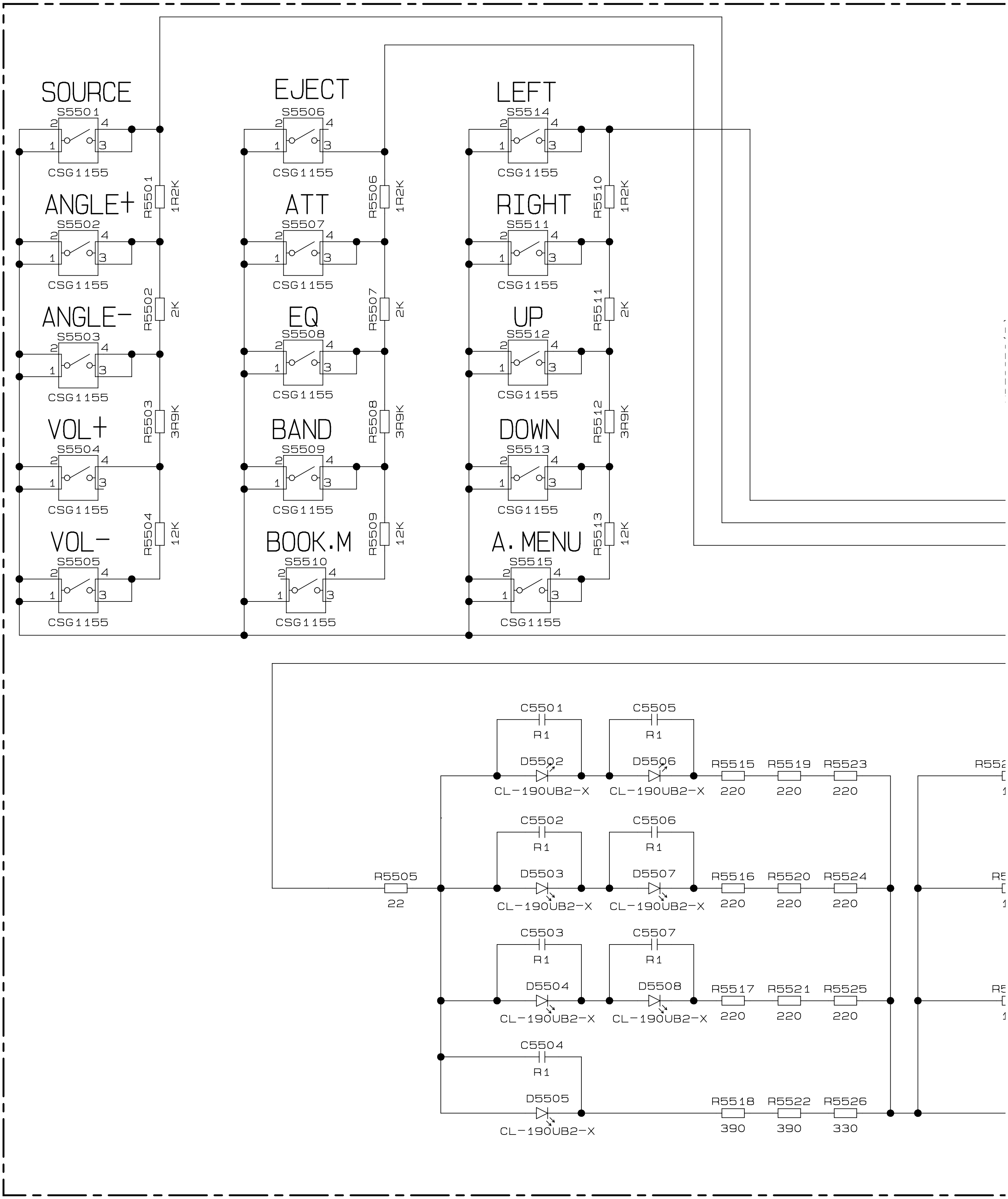
Consists of
MONITOR PCB
INVERTER PCB
UPPER PCB

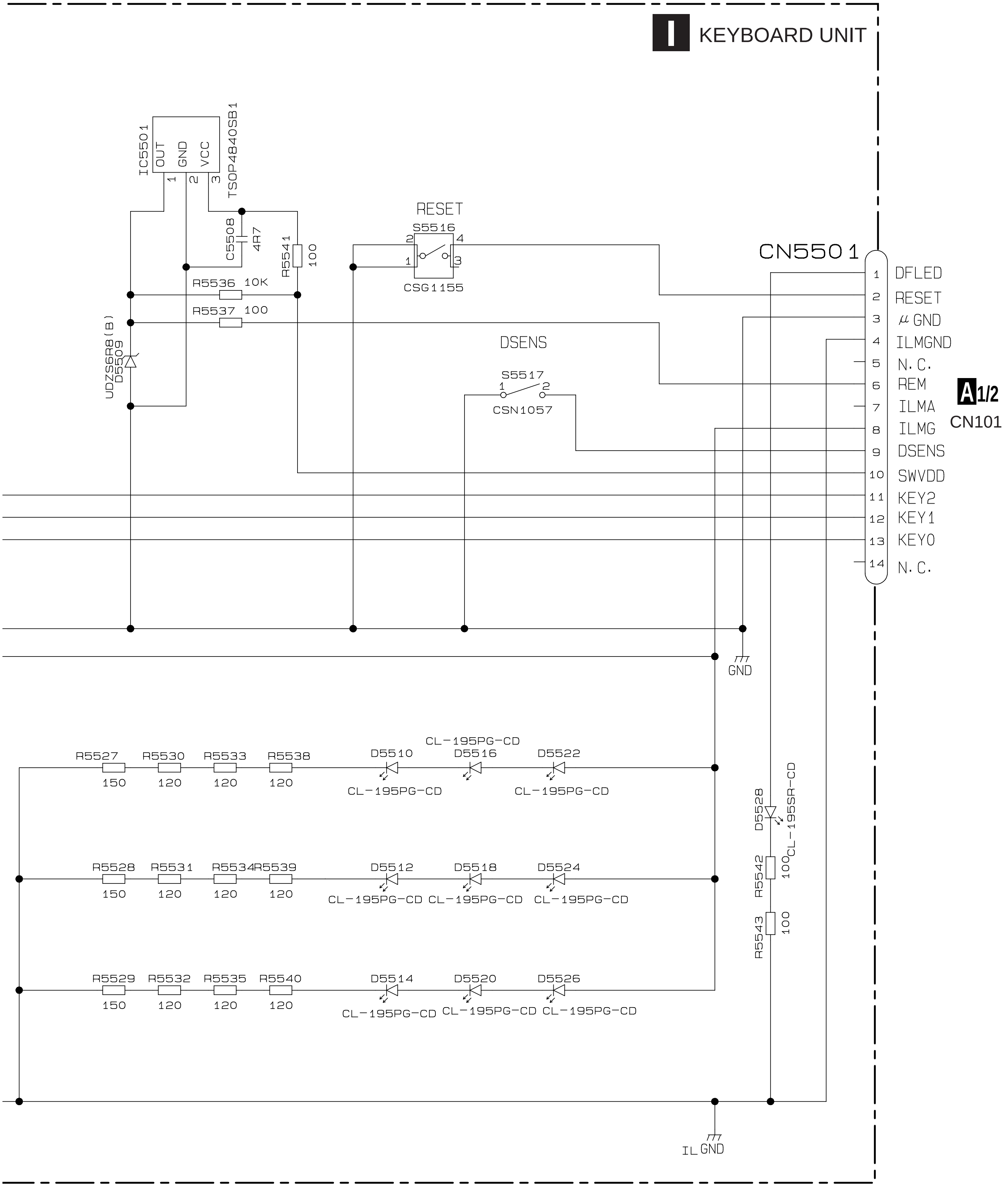


H UPPER PCB
R4374
220
D4371
C4371
R1
CL-190UB2-X
D4372
C4372
R1
CL-190UB2-X
R4375
220
R4376
220
R4377
220
R4378
220
D4373
C4373
R1
CL-190UB2-X
Center Illumination(Blue)
R4354
330
D4351
CL-195PG-CD
D4352
CL-195PG-CD
R4355
270
R4356
270
R4357
330
R4358
330
D4353
CL-195PG-CD
D4354
CL-195PG-CD
Button Illumination(Green)
S4391
CSG1126
INFO
S4392
CSG1126
PGM
S4393
CSG1126
FLIP DOWN
S4394
CSG1126
OPEN/CLOSE
1
2

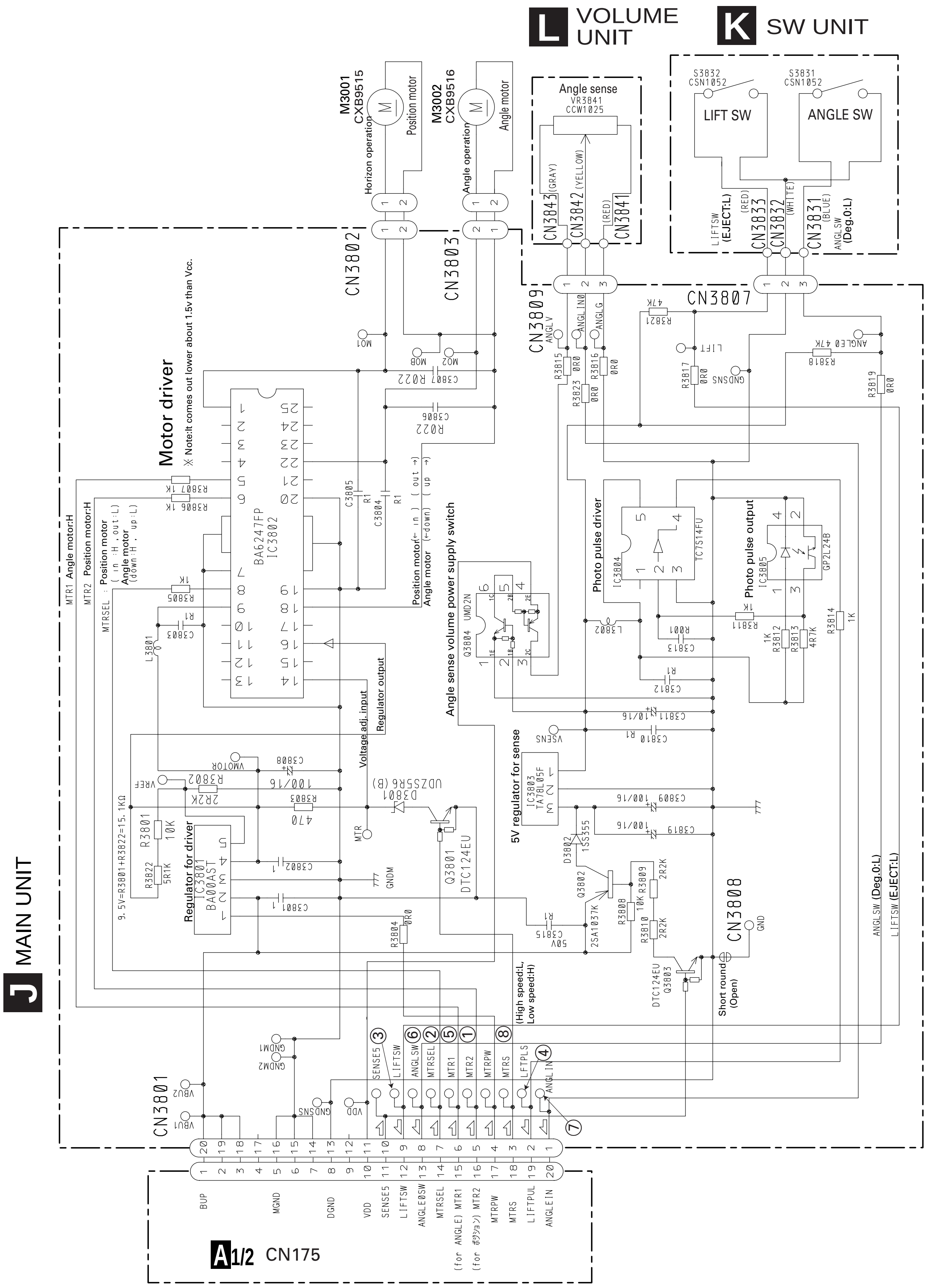
H

3.13 KEYBOARD UNIT


SOURCE
S5501
CSG1155
ANGLE+
S5502
CSG1155
ANGLE−
S5503
CSG1155
VOL+
S5504
CSG1155
VOL−
S5505
CSG1155
R5501 1R2K
R5502 2K
R5503 3R9K
R5504 12K
EJECT
S5506
CSG1155
ATT
S5507
CSG1155
EQ
S5508
CSG1155
BAND
S5509
CSG1155
BOOK.M
S5510
CSG1155
R5506 1R2K
R5507 2K
R5508 3R9K
R5509 12K
LEFT
S5514
CSG1155
RIGHT
S5511
CSG1155
UP
S5512
CSG1155
DOWN
S5513
CSG1155
A.MENU
S5515
CSG1155
R5510 1R2K
R5511 2K
R5512 3R9K
R5513 12K
C5501 R1
D5502 CL−190UB2−X
C5505 R1
D5506 CL−190UB2−X
R5515 220
R5519 220
R5523 220
C5502 R1
D5503 CL−190UB2−X
C5506 R1
D5507 CL−190UB2−X
R5516 220
R5520 220
R5524 220
R5505 22
C5503 R1
D5504 CL−190UB2−X
C5507 R1
D5508 CL−190UB2−X
R5517 220
R5521 220
R5525 220
C5504 R1
D5505 CL−190UB2−X
R5518 390
R5522 390
R5526 330


I KEYBOARD UNIT
IC5501
TSOP4840SB1
OUT
GND
VCC
1
2
3
C5508
4R7
R5541
100
R5536 10K
R5537 100
UDZS6R8(B)
D5509
RESET
S5516
CSG1155
DSENS
S5517
CSN1057
CN5501
1 DFLED
2 RESET
3 μGND
4 ILMGND
5 N.C.
6 REM
7 ILMA
8 ILMG
9 DSENS
10 SWVDD
11 KEY2
12 KEY1
13 KEY0
14 N.C.
A 1/2
CN101
GND
R5527 150
R5530 120
R5533 120
R5538 120
D5510 CL-195PG-CD
D5516 CL-195PG-CD
D5522 CL-195PG-CD
R5528 150
R5531 120
R5534 120
R5539 120
D5512 CL-195PG-CD
D5518 CL-195PG-CD
D5524 CL-195PG-CD
R5529 150
R5532 120
R5535 120
R5540 120
D5514 CL-195PG-CD
D5520 CL-195PG-CD
D5526 CL-195PG-CD
D5528 CL-195SR-CD
R5542 100
R5543 100
IL GND

3.14 MAIN UNIT, SW UNIT AND VOLUME UNIT


L VOLUME UNIT
K SW UNIT
Angle sense
VR3841
CCW1025
S3832
CSN1052
LIFT SW
S3831
CSN1052
ANGLE SW
M3001
CXB9515
Position motor
Horizon operation
M3002
CXB9516
Angle motor
Angle operation
CN3802
CN3803
CN3809
CN3807
CN3843
CN3842
CN3841
CN3833
CN3832
CN3831
LIFTSW (EJECT:L)
ANGLSW (Deg.0:L)
Motor driver
※ Note:it comes out lower about 1.5v than Vcc.
BA6247FP
IC3802
MTR1 Angle motor:H
MTR2 Position motor:H
MTRSEL : Position motor (in H , out:L)
Angle motor (down:H , up:L)
Position motor (← in) (out →)
Angle motor (←down) (up →)
Angle sense volume power supply switch
Q3804 UMD2N
Photo pulse driver
IC3804
TC7S14FU
Photo pulse output
IC3805
GP2L24B
Voltage adj. input
Regulator output
D3801
UDZS5R6(B)
Q3801
DTC124EU
5V regulator for sense
IC3803
TA78L05F
D3802
1SS355
Q3802
2SA1037K
Regulator for driver
IC3801
BA00AST
9.5V=R3801+R3822=15.1kΩ
CN3808
DTC124EU
Q3803
Short round (Open)
(High speed:L, Low speed:H)
J MAIN UNIT
CN3801
SENSE5 ③
LIFTSW
ANGLSW ⑥
MTRSEL ②
MTR1 ⑤
MTR2 ①
MTRPW
MTRS ⑧
LFTPLS ④
ANGLIN
⑦
A 1/2 CN175
BUP
MGND
DGND
VDD
SENSE5
LIFTSW
ANGLE0SW
MTRSEL
(for ANGLE) MTR1
(for ポジション) MTR2
MTRPW
MTRS
LIFTPUL
ANGLEIN

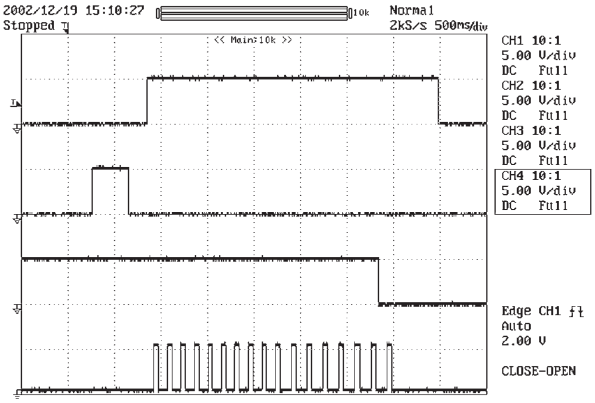
J K L

Waveforms

The encircled number denote measuring pointes in the circuit diagram.

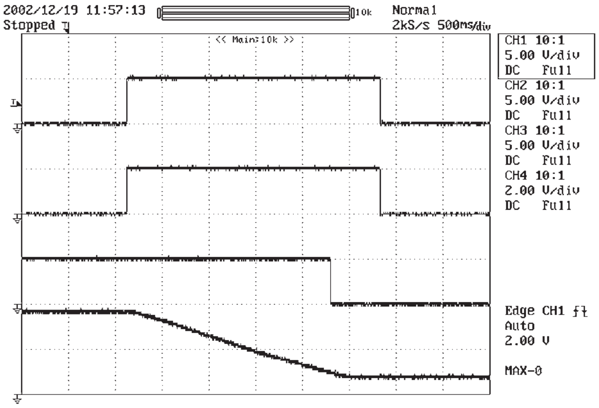
- CLOSE -> OPEN

① CH1:MTR2 ② CH2:MTRSEL
③ CH3:LIFTSW ④ CH4:LFTPLS



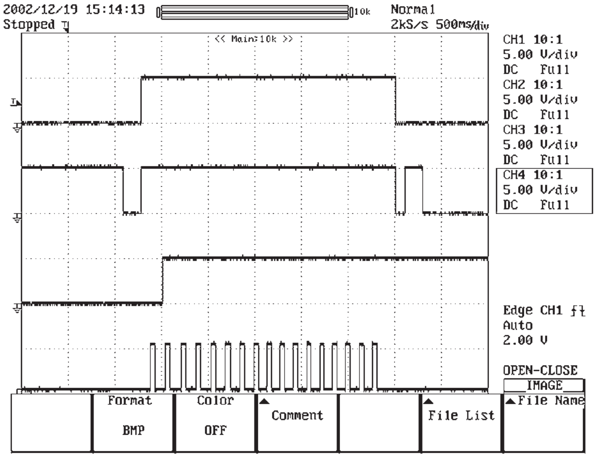
- MAX -> Deg.0 DOWN

⑤ CH1:MTR1 ② CH2:MTRSEL
⑥ CH3:ANGLSW ⑦ CH4:ANGLIN



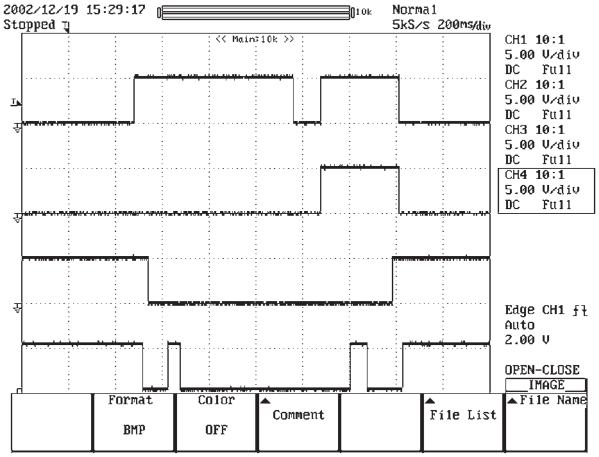
- OPEN -> CLOSE

① CH1:MTR2 ② CH2:MTRSEL
③ CH3:LIFTSW ④ CH4:LFTPLS



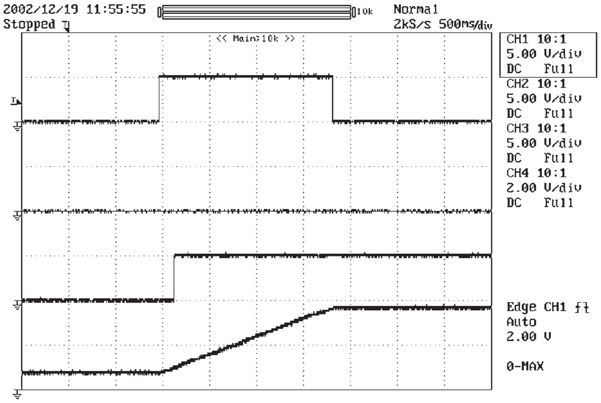
- Set back open -> Set

① CH1:MTR2 ⑧ CH2:MTRS
③ CH3:LIFTSW ④ CH4:LFTPLS



- 0->MAX

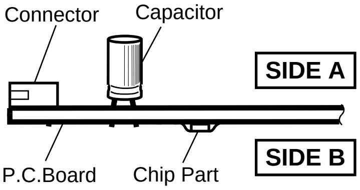
⑤ CH1:MTR1 ② CH2:MTRSEL
⑥ CH3:ANGLSW ⑦ CH4:ANGLIN

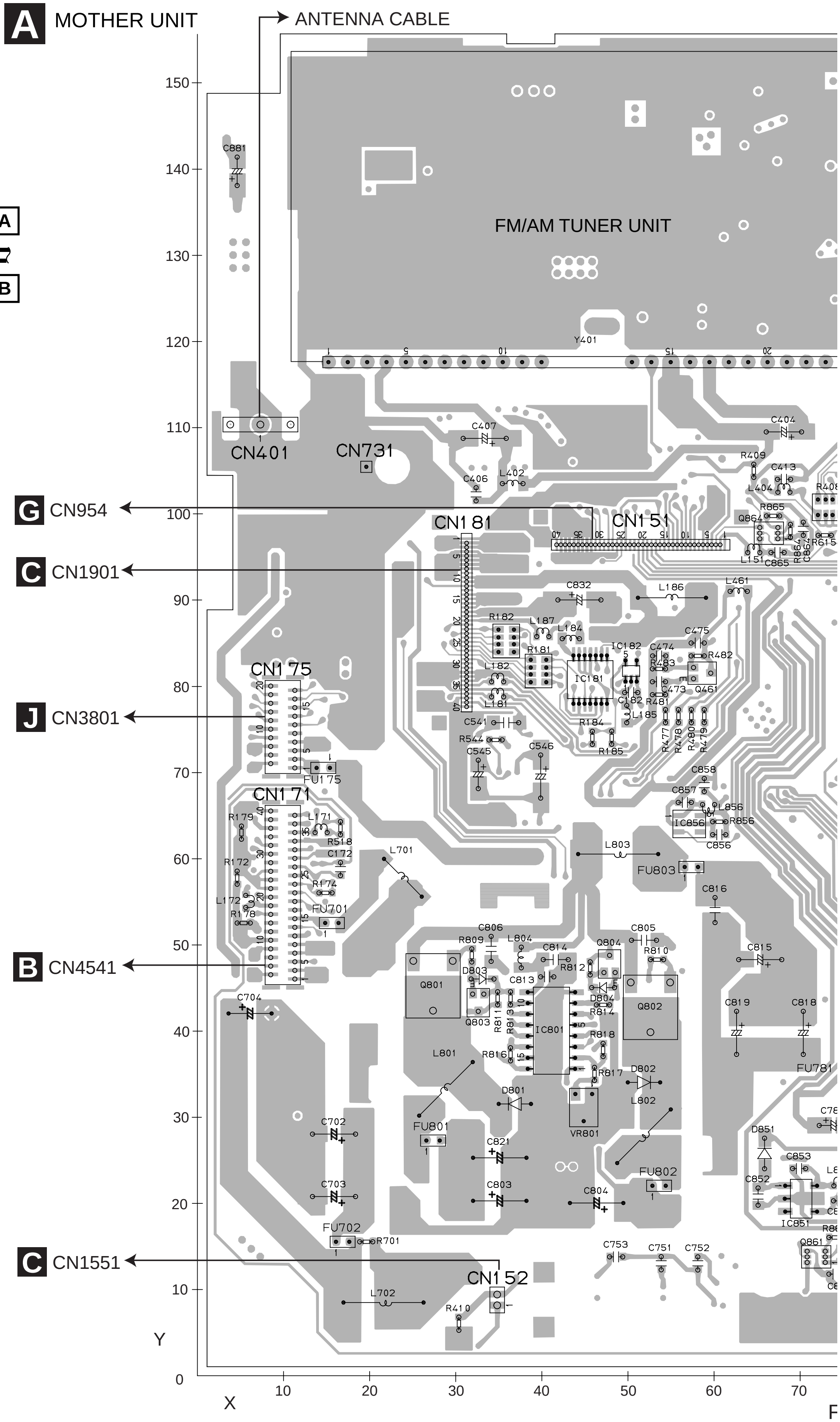


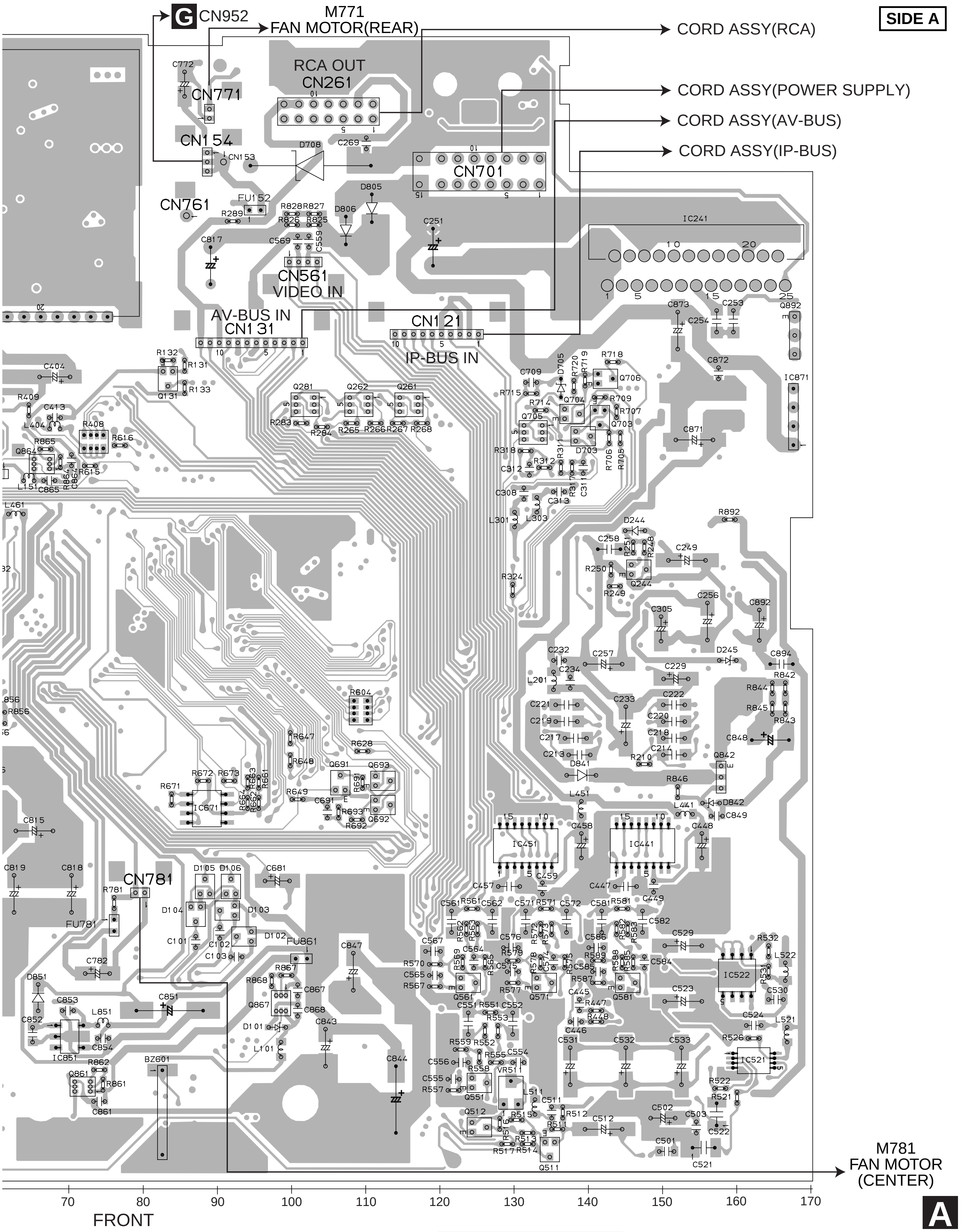
4. PCB CONNECTION DIAGRAM
4.1 MOTHER UNIT

NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams


Connector
Capacitor
SIDE A
SIDE B
P.C.Board
Chip Part


A MOTHER UNIT
ANTENNA CABLE
FM/AM TUNER UNIT
Y401
CN401
CN731
G CN954
C CN1901
J CN3801
B CN4541
C CN1551
CN181
CN151
CN175
CN171
CN152
FU175
FU701
FU702
FU801
FU802
FU803
FU781
C881
C407
C406
L402
C404
R409
C413
L404
R865
Q864
L151
C865
C832
L186
L461
R182
L187
L184
R181
IC182
C474
C475
R483
R482
L182
IC181
C473
Q461
L181
C182
R481
L185
C541
R184
R544
C545
C546
R185
R477
R478
R480
R479
C858
C857
L856
IC856
R856
C856
R179
L171
R518
C172
R172
R174
L172
R178
L701
L803
C816
C806
R809
L804
C814
Q804
C805
R810
R812
D803
C813
Q801
D804
R814
Q802
C815
C819
C818
Q803
R811
R813
IC801
R818
R816
L801
R817
D802
D801
L802
VR801
C704
C702
C821
C703
C803
C804
D851
C853
C852
IC851
R701
C753
C751
C752
Q861
L702
R410
Y
X
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150


A
B
C
D
E
F
G CN952
M771
FAN MOTOR(REAR)
CORD ASSY(RCA)
SIDE A
CORD ASSY(POWER SUPPLY)
CORD ASSY(AV-BUS)
CORD ASSY(IP-BUS)
RCA OUT
CN261
CN771
CN154
CN153
D708
C269
CN701
CN761
FU152
R828 R827
R826 R825
D805
D806
C251
IC241
C817
C569
C559
CN561
VIDEO IN
AV-BUS IN
CN131
CN121
IP-BUS IN
C873
C253
C254
Q892
C872
IC871
C871
R132
R131
R133
Q131
C404
R409
C413
L404
R408
R616
R865
Q864
R615
L151
C865
L461
Q281
Q262
Q261
R283
R284
R265
R266
R267
R268
C709
D705
R720
R719
R718
Q706
R715
R714
Q704
R709
Q705
R707
Q703
R318
D703
R311
R706
R705
C312
R312
C311
R317
C308
C313
L301
L303
R892
D244
C258
R251
R248
C249
R250
Q244
R249
R324
C256
C305
C892
C232
C234
C257
D245
C894
L201
C229
R842
R844
R845
R843
C221
C233
C222
C219
C220
C217
C218
C848
C213
C214
R210
Q842
D841
R846
L451
L441
D842
C849
IC451
IC441
C458
C448
C459
C457
C447
C449
R604
R647
R628
R648
Q691
Q693
R672
R673
R663
R661
R671
IC671
R691
R649
C691
R693
Q692
R692
C815
C819
C818
CN781
R781
FU781
D105
D106
C681
D104
D103
C101
C102
C103
D102
FU861
C847
C782
D851
C853
C852
L851
IC851
C854
R862
Q861
R861
C861
R867
R868
C867
Q867
C868
D101
L101
C851
C843
C844
BZ601
C561
R561
C562
C571
R571
C572
C581
R581
C582
C567
R570
C565
R567
C564
C576
R579
C586
C585
R589
R587
C529
R532
L522
C584
IC522
R531
C530
C523
Q561
Q571
Q581
R577
C445
R447
R448
C446
C551
R551
C552
R553
C524
L521
R526
IC521
R559
R552
R555
C554
C556
R558
VR511
C531
C532
C533
C555
R557
Q551
L511
C511
R522
R521
Q512
R515
R512
C512
C502
C503
C522
R513
R514
R517
C501
Q511
C521
M781
FAN MOTOR
(CENTER)
70
80
90
100
110
120
130
140
150
160
170
FRONT
A

A

A MOTHER UNIT

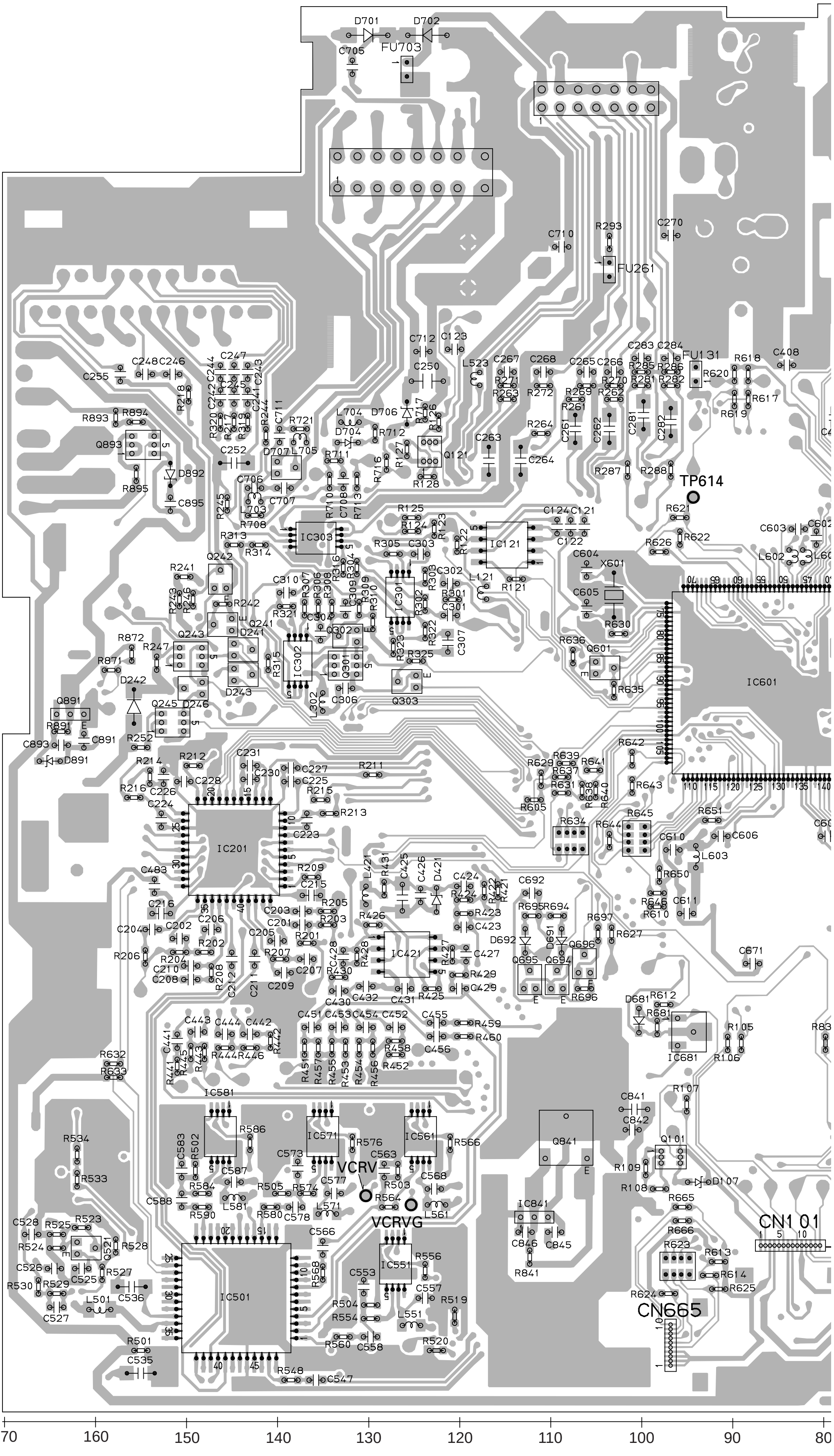
B

C

D

E

F


D701
D702
C705
FU703
C710
R293
C270
FU261
C712
C123
C250
L523
C267
C268
C265
C266
C283
C284
FU131
R618
C408
R620
R617
R619
C248
C246
C247
C255
C244
C242
C245
C243
R218
R893
R894
Q893
D892
R895
C895
R320
R319
R244
C711
R721
D704
D706
R712
R717
R126
Q121
R127
R128
C263
C264
R264
R263
R272
R269
R270
R285
R286
R282
R281
R262
R261
C261
C262
C281
C282
R287
R288
TP614
R621
R622
C252
D707
L705
R711
R716
C706
L703
C707
R708
R245
R710
C708
R713
R125
R124
R123
R122
C124
C121
C122
IC121
R121
L121
C603
C602
R626
L602
R313
R314
IC303
R305
C303
C604
X601
C605
R630
R241
Q242
R243
R246
R242
C310
R307
R306
R308
R309
R310
R304
R316
IC301
R303
R302
R301
C301
C302
R322
R321
C304
Q241
C309
Q243
R247
D241
IC302
Q302
R315
Q301
C306
L302
R325
R329
C307
Q303
R636
Q601
R635
IC601
R872
R871
D242
D243
D246
Q245
Q891
R891
C893
C891
D891
R252
R214
R212
C231
C227
C225
R211
C228
C230
R215
R216
C226
C224
R213
IC201
C223
C483
R209
C215
C216
R205
C203
R203
C201
C206
C202
C204
R202
C205
R201
R206
R207
C210
C208
R208
C212
C211
C209
C207
R421
R431
C425
C426
D421
C424
R424
R422
R423
C423
R426
C428
R428
R430
IC421
R427
C427
R429
C429
C430
C432
C431
R425
R629
R639
R641
R637
R631
R640
R605
R642
R643
R634
R644
R645
R651
C610
C606
L603
R650
R646
R610
C611
C692
R695
R694
R697
R627
D692
D691
Q696
Q695
Q694
R696
C671
D681
R612
R681
IC681
R105
R106
R83
C443
C444
C442
C441
R441
R445
R443
R444
R446
R442
C451
C453
C454
C452
C455
R459
R460
C456
R458
R452
R451
R457
R455
R453
R454
R456
R632
R633
IC581
C583
R502
R586
IC571
R576
C563
IC561
R566
C573
C587
R584
C577
VCRV
R503
C568
R564
VCRVG
R505
R574
L571
L581
R590
R580
C578
C588
Q841
C841
C842
R107
Q101
R109
R108
D107
R665
R666
R623
R613
R614
R625
R624
CN101
CN665
IC841
C846
C845
R841
R534
R533
C528
R525
R523
R524
R521
R528
C526
C525
R527
R530
R529
C536
L501
C527
IC501
C566
R568
C553
IC551
R556
C557
R519
R504
R554
L551
R560
C558
R520
R501
C535
R548
C547
170
160
150
140
130
120
110
100
90
80

SIDE B

A

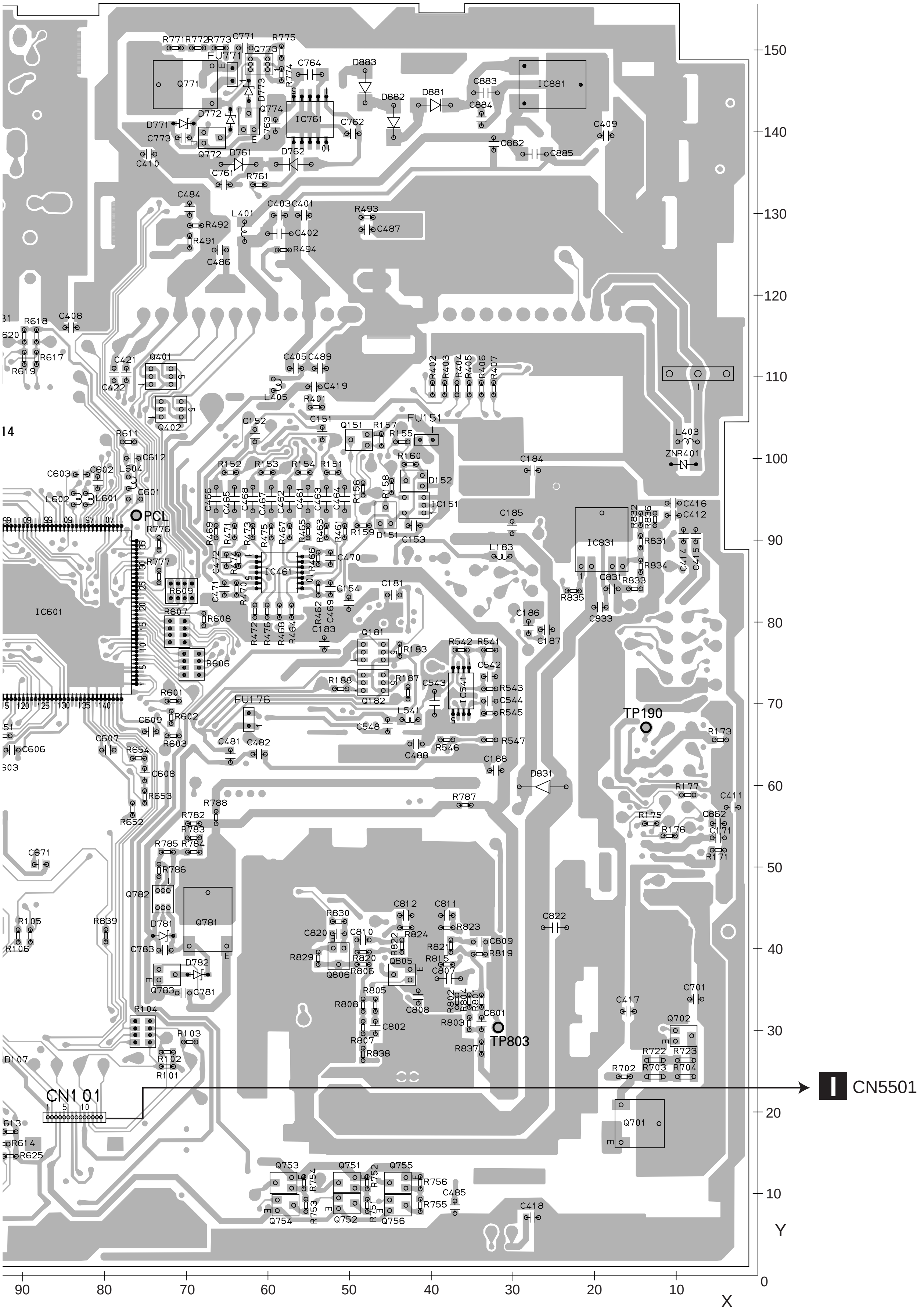
B

C

D

E

F

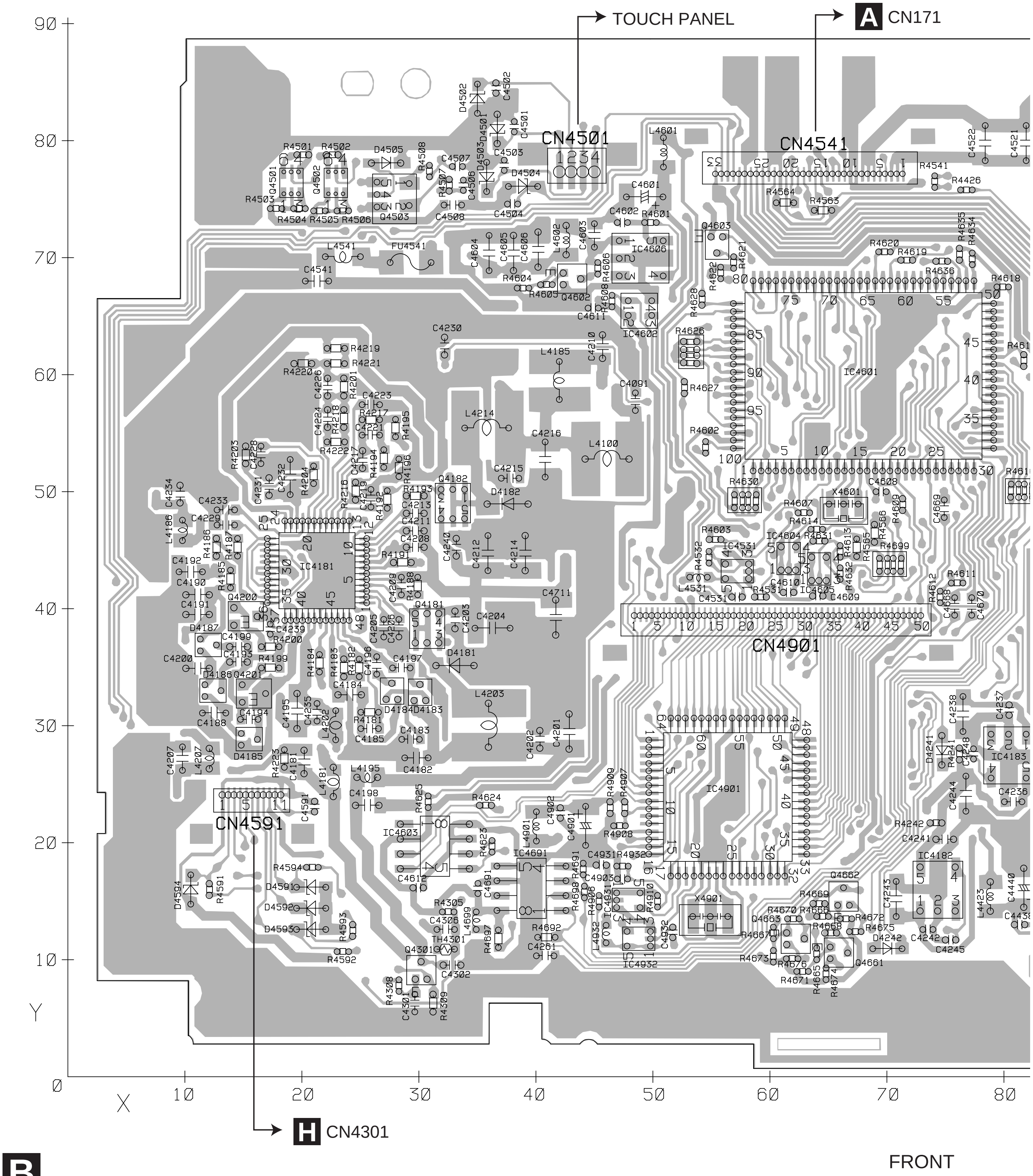

R771 R772 R773 C771 R775
FU771
Q773
Q771
C764
D883
R774
D773
IC881
C883
D882
D881
C884
D772
Q774
D771
C773
IC761
C763
C762
C409
Q772
D761
D762
C882
C885
C410
C761
R761
C484
C403 C401
R493
L401
R492
C402
C487
R491
R494
C486
C408
R618
R617
R619
C421
Q401
C422
C405 C489
R402 R403 R404 R405 R406 R407
L405
C419
R401
Q402
14
R611
C152
C151
Q151
R157
FU151
R155
L403
C612
ZNR401
R152
R153
R154
R151
R160
C184
C603
C602
L604
D152
C601
L602
L601
C466 C465 C468 C467 C462 C461 C463 C464
R156
R158
IC151
C185
C416
C412
PCL
R776
R469 R471 R473 R475 R467 R465 R463 R461
R159
D151
C153
R832
R836
L183
IC831
R831
C414
C415
R777
C472
R474
IC461
R466
C470
C831
R834
R833
R835
C833
R609
C471
R470
C154
C181
R462
C469
C186
IC601
R607
R608
R472 R476 R468 R464
C183
C187
Q181
R183
R542 R541
R606
C542
R188
R187
C543
IC541
R543
C544
R545
R601
Q182
FU176
L541
TP190
C609
R602
C548
R173
C607
R603
C481
C482
C606
R654
C488
R546
R547
C608
C188
D831
R653
R788
R787
R177
C411
R652
R782
R175
C862
R783
R176
C171
R785 R784
R171
C671
R786
Q782
Q781
R830
C812
C811
R105
R839
R824
R823
C822
D781
C820
C810
R822
C809
R106
R821
R819
C783
R829
R820
Q805
R815
D782
Q806
R806
C807
Q783
C781
C701
R805
C417
R808
R802
R804
C801
R104
C808
C802
R803
Q702
TP803
R103
R807
R838
R837
R722 R723
R102
R703 R704
R101
R702
CN1 01
1 5 10
Q701
613
R614
R625
Q753 Q751 Q755
R756
R754
R752
C485
R755
R753
R751
C418
Q754 Q752 Q756
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10
Y
0
90 80 70 60 50 40 30 20 10
X

I CN5501

A

4.2 MONITOR PCB

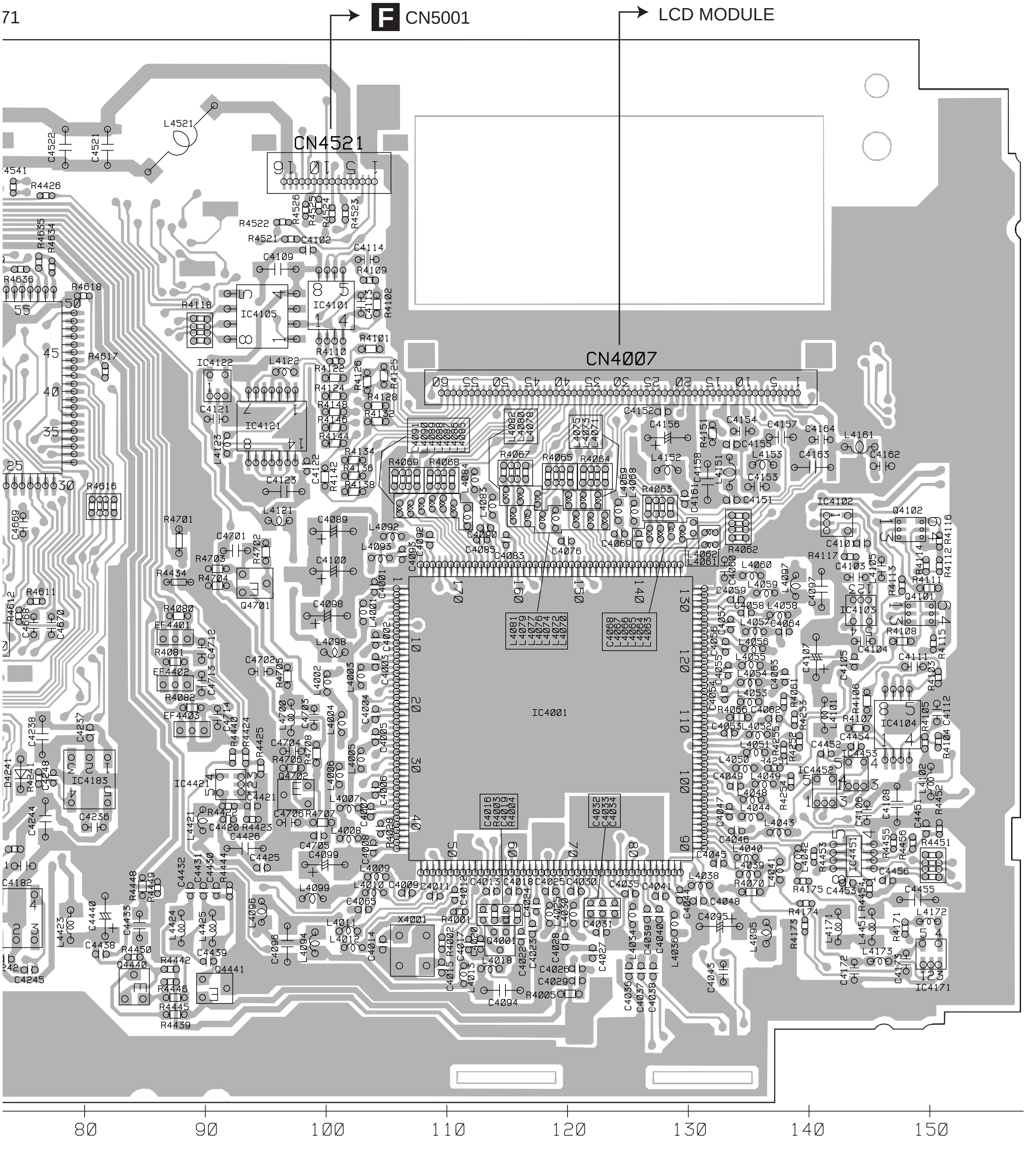
B MONITOR PCB


TOUCH PANEL
A CN171
CN4501
CN4541
CN4591
CN4901
H CN4301
FRONT
IC4181
IC4601
IC4901
IC4602
IC4603
IC4604
IC4605
IC4606
IC4691
IC4931
IC4932
IC4182
IC4183
IC4531
X4601
X4901
Q4181
Q4182
Q4200
Q4201
Q4301
Q4501
Q4502
Q4503
Q4602
Q4603
Q4661
Q4662
Q4663
L4100
L4185
L4203
L4214
L4541
L4601
FU4541
D4181
D4182
D4183
D4184
D4185
D4186
D4187
D4241
D4242
D4501
D4502
D4503
D4504
D4505
D4591
D4592
D4593
D4594
TH4301
X
Y
0
10
20
30
40
50
60
70
80
90

A

SIDE A

B


71
F CN5001
LCD MODULE
CN4521
L4521
C4522
C4521
CN4007
IC4105
IC4101
IC4122
IC4121
IC4102
IC4103
IC4104
IC4183
IC4421
IC4451
IC4452
IC4453
IC4171
IC4001
Q4102
Q4101
Q4701
Q4702
Q4001
Q4440
Q4441
X4001
EF4401
EF4402
EF4403
R4118
R4616
R4617
R4618
R4701
C4089
C4100
C4098
C4099
C4094
C4095
80
90
100
110
120
130
140
150

C

D

E

F

ONT

B

A

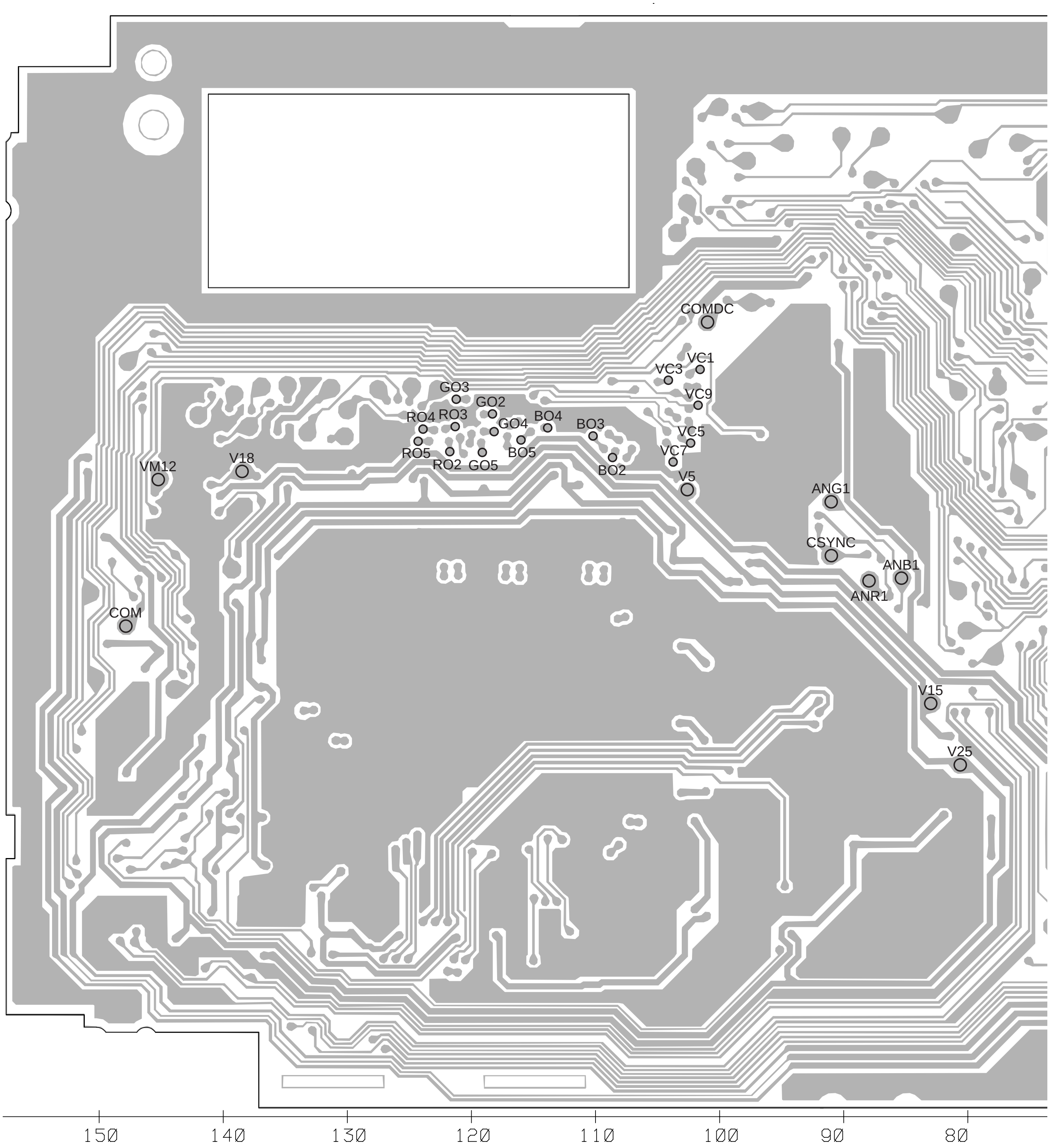
B MONITOR PCB

B

C

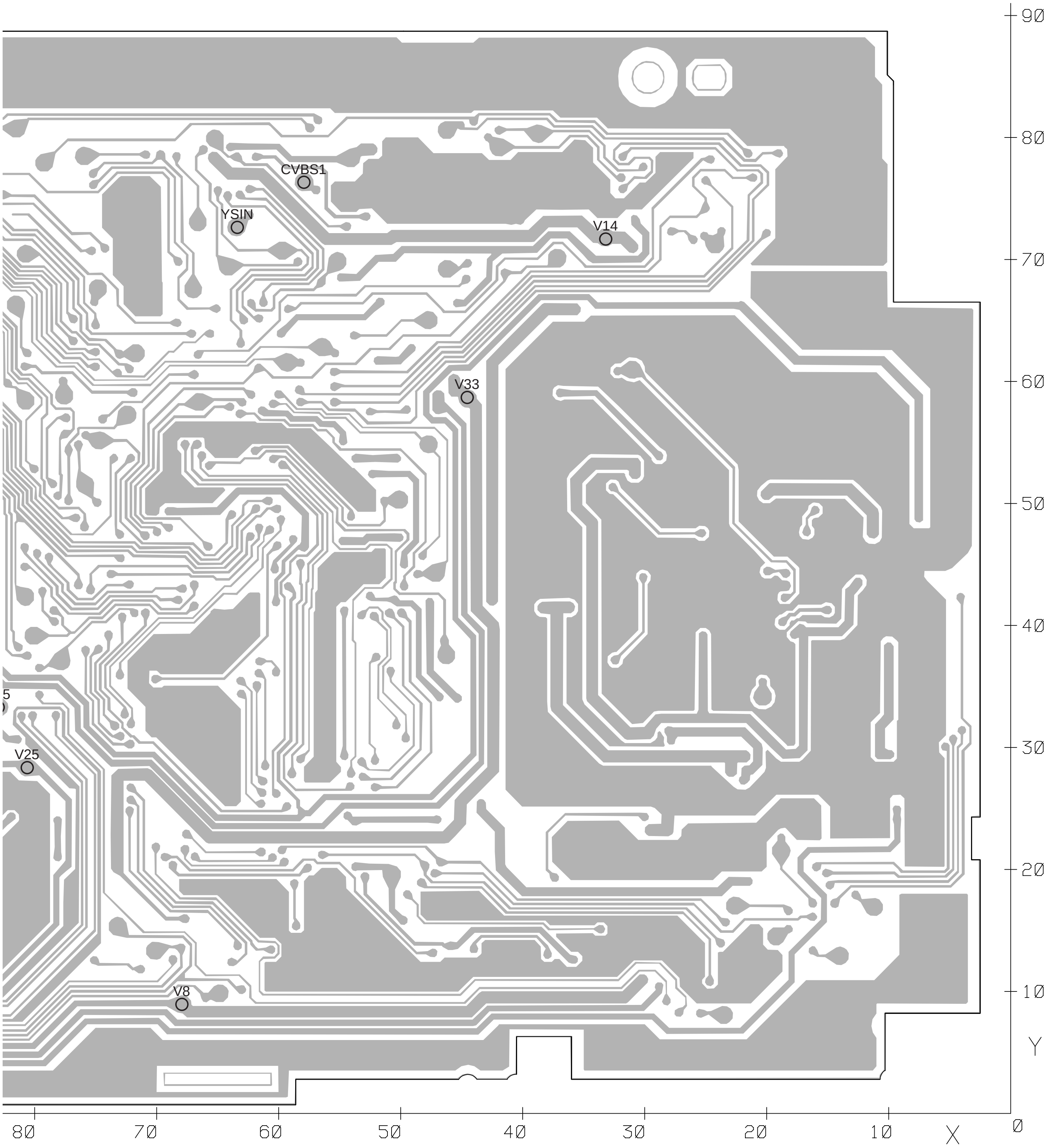
D

E


COMDC
VC1
VC3
VC9
GO3
GO2
RO4
RO3
GO4
BO4
BO3
VC5
VC7
RO5
RO2
GO5
BO5
BO2
V5
VM12
V18
ANG1
CSYNC
ANB1
ANR1
COM
V15
V25
150
140
130
120
110
100
90
80

F

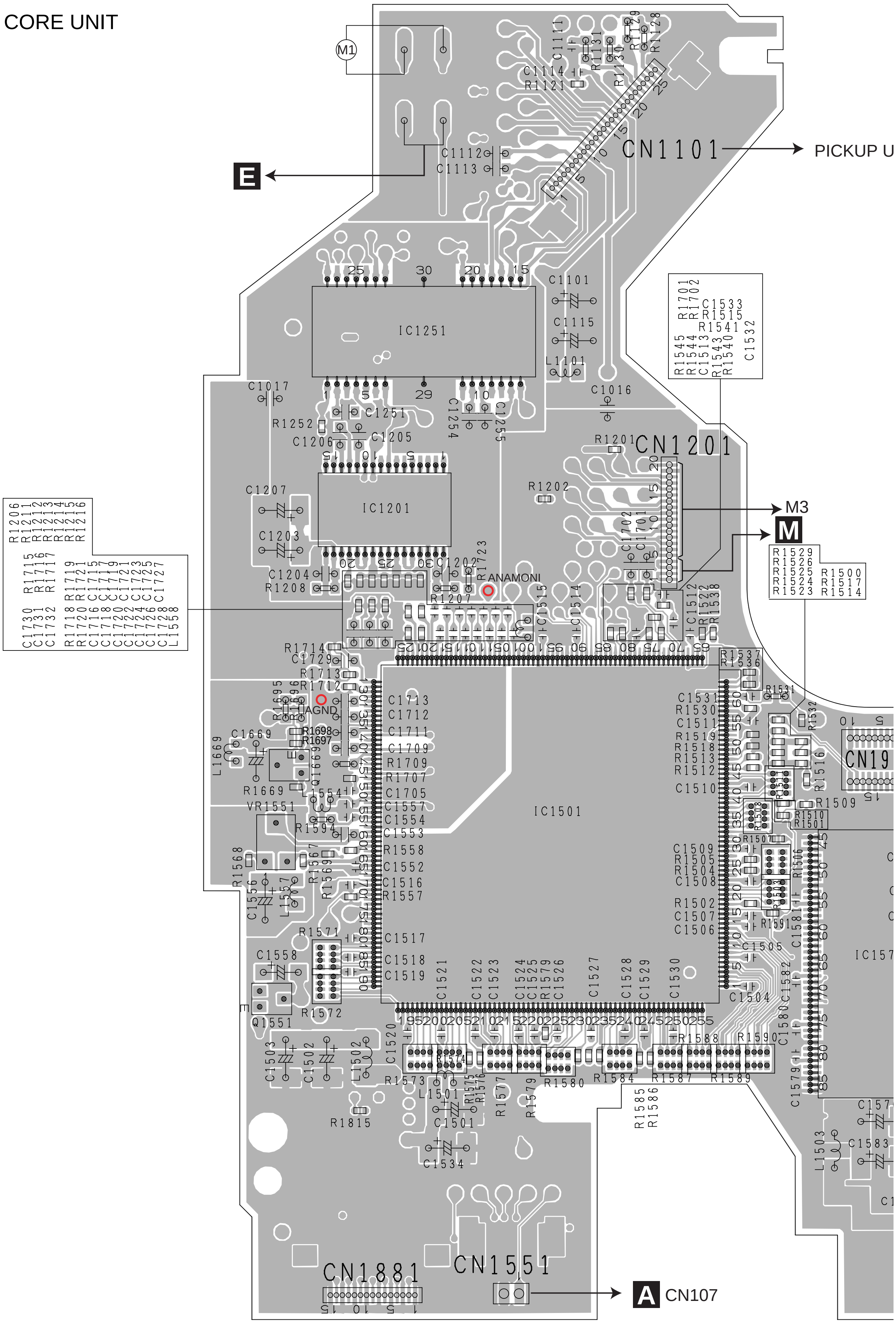
SIDE B


CVBS1
YSIN
V14
V33
V25
V8
Y
X

B

4.3 DVD CORE UNIT

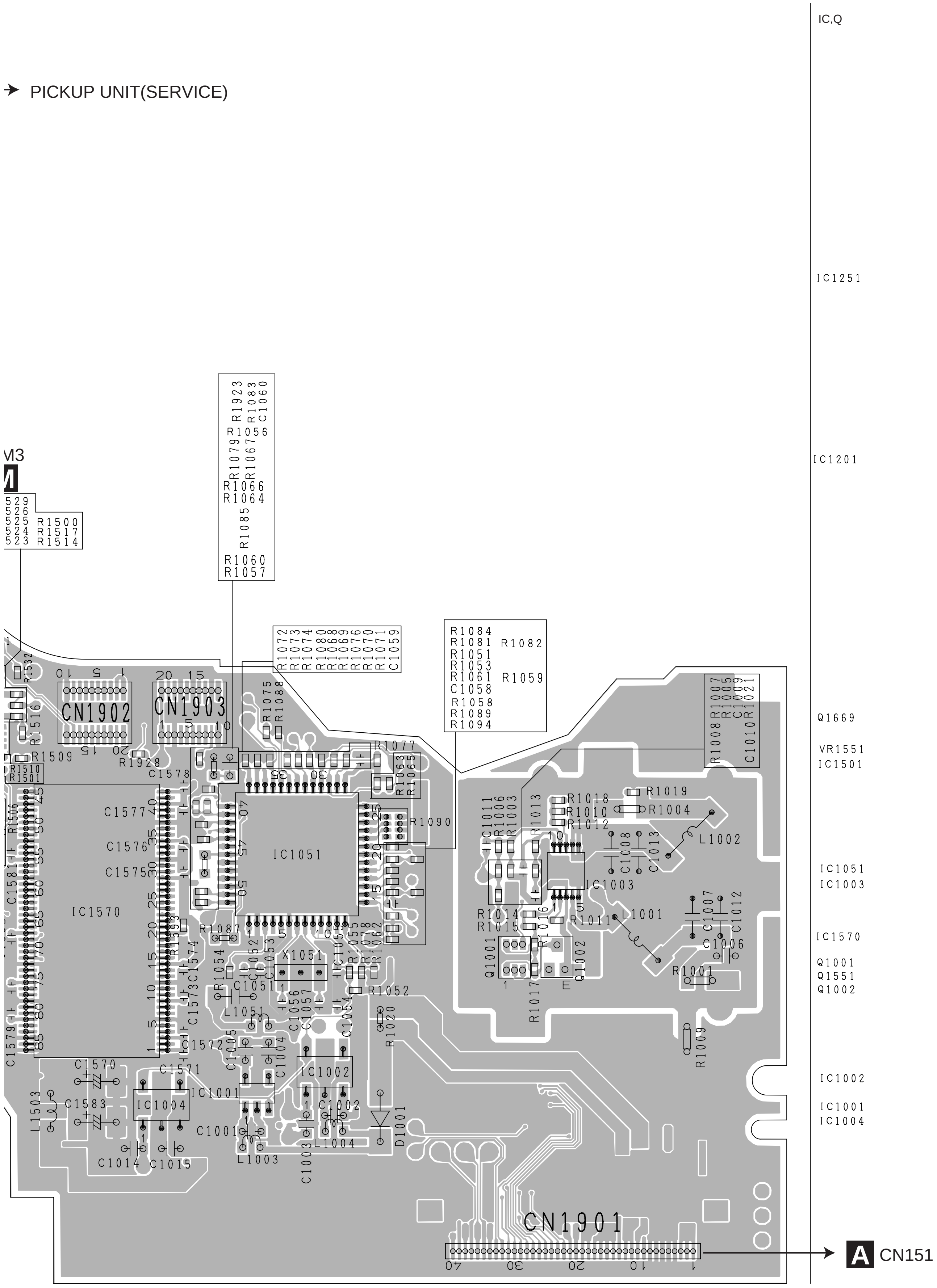
C DVD CORE UNIT


A
B
C
D
E
F
M1
CN1101
PICKUP U
E
C1111
R1131
R1130
R1129
R1128
C1114
R1121
C1112
C1113
IC1251
C1101
C1115
L1101
C1016
C1017
R1252
C1206
C1251
C1205
C1254
C1255
R1201
CN1201
R1202
IC1201
C1207
C1203
C1204
R1208
R1207
C1202
R1723
ANAMONI
M3
M
R1529 R1526 R1525 R1523 R1500 R1517 R1524 R1514
R1701 R1702 C1533 R1515 R1541 R1545 R1544 C1513 R1543 R1540 C1532
R1206 R1211 R1212 R1213 R1214 R1215 R1216
R1715 R1716 R1717
C1730 C1731 C1732
R1718 R1720 C1716 C1718 C1720 C1722 C1724 C1726 C1728 L1558
R1719 R1721 C1715 C1717 C1719 C1721 C1723 C1725 C1727
C1702 C1701
C1515 C1514 C1512 R1522 R1538
R1714 C1729 R1713 R1712
R1695 R1696 AGND
R1698 R1697
C1669 L1669 R1669 Q1669
VR1551
R1594
R1568 C1556 L1557 R1567 R1569
IC1501
C1713 C1712 C1711 C1709 R1709 R1707 C1705 C1557 C1554 C1553 R1558 C1552 C1516 R1557 C1517 C1518 C1519
R1537 R1536 R1531 R1532
C1531 R1530 C1511 R1519 R1518 R1513 R1512 C1510
C1509 R1505 R1504 C1508 R1502 C1507 C1506
CN19
R1516 R1509 R1510 R1501 R1507 R1508 R1506 R1503 R1591
C1505 C1581 C1582 C1504 C1580 C1579
IC157
C1521 C1522 C1523 C1524 C1525 R1579 C1526 C1527 C1528 C1529 C1530
R1571 C1558 Q1551 R1572
C1503 C1502 L1502 C1520
R1573 R1574 R1575 R1576 L1501 R1577 R1579 R1580 R1584 R1587 R1588 R1589 R1590 R1585 R1586
R1815 C1501 C1534
L1503 C1583
CN1881
CN1551
A CN107

C

SIDE A

A


IC,Q
PICKUP UNIT(SERVICE)
IC1251
IC1201
M3
Q1669
VR1551
IC1501
IC1051
IC1003
IC1570
Q1001
Q1551
Q1002
IC1002
IC1001
IC1004
CN1902
CN1903
CN1901
IC1051
IC1570
IC1003
IC1002
IC1001
IC1004
X1051
Q1001
Q1002
D1001
L1001
L1002
L1003
L1004
L1051
L1503
R1923 R1083 C1060
R1079 R1056 R1067
R1066
R1064
R1085
R1060
R1057
R1500
R1517
R1514
R1072 R1073 R1074 R1080 R1068 R1069 R1076 R1070 R1071 C1059
R1084
R1081 R1082
R1051
R1053
R1061 R1059
C1058
R1058
R1089
R1094
R1008 R1007 R1005 C1009 C1010 R1021
R1075 R1088
R1077
R1063 R1065
R1090
R1018
R1019
R1010
R1004
R1012
C1011 R1006 R1003
R1013
C1008
C1013
R1014
R1015
R1016
R1011
C1007
C1012
C1006
R1001
R1017
R1009
R1087
R1054
R1052
R1020
R1055 R1078 R1062
C1052 C1053
C1051
C1055
C1056 C1057
C1054
C1005
C1004
C1003
C1002
C1001
C1014
C1015
C1570
C1571
C1572
C1583
C1573 C1574
C1575
C1576
C1577
C1578
C1579
C1581
R1532
R1516
R1509
R1510
R1501
R1506
R1928
A CN151

B

C

D

E

F

C

A

IC,Q
Q1101
Q1106
Q1102
Q1107
Q1103
Q1105
Q1104

B

C

IC1852

D

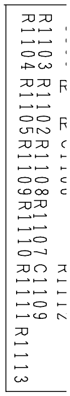
IC1851
Q1851
IC1301 Q1852
IC1671
IC1672
IC1108 IC1853
Q1853 IC1882

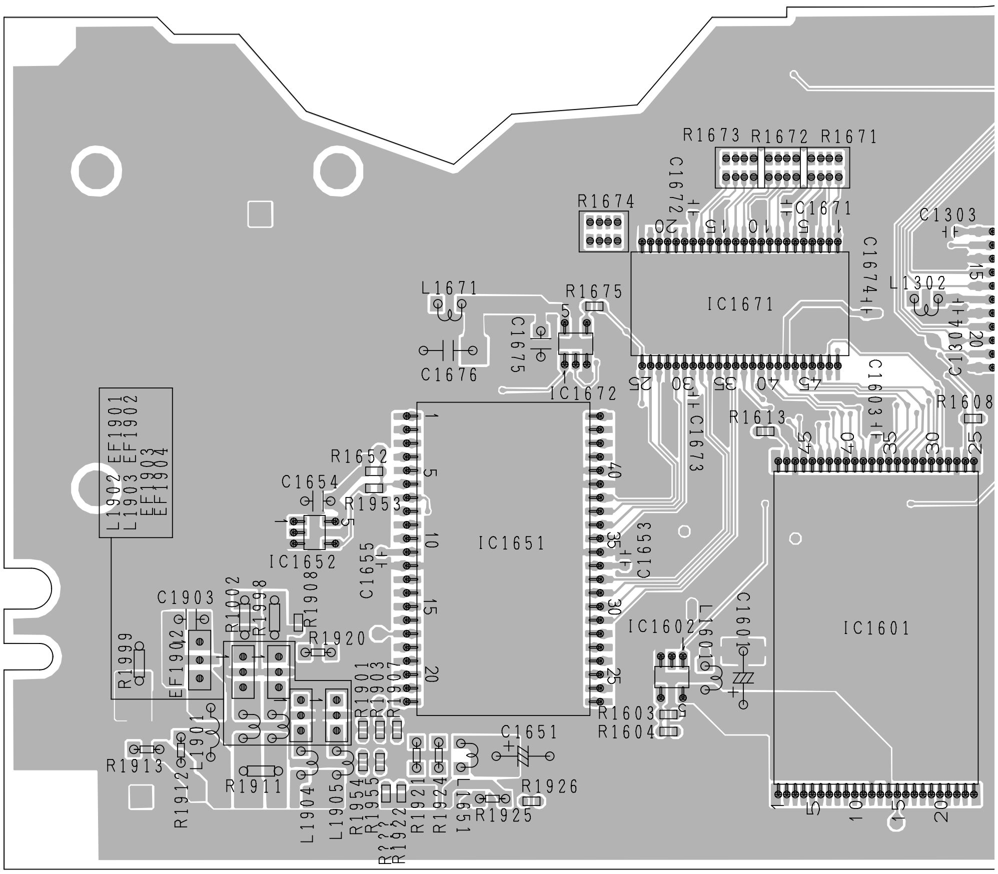
E

IC1802
IC1651
IC1652
IC1881
IC1601
IC1602
IC1231

F

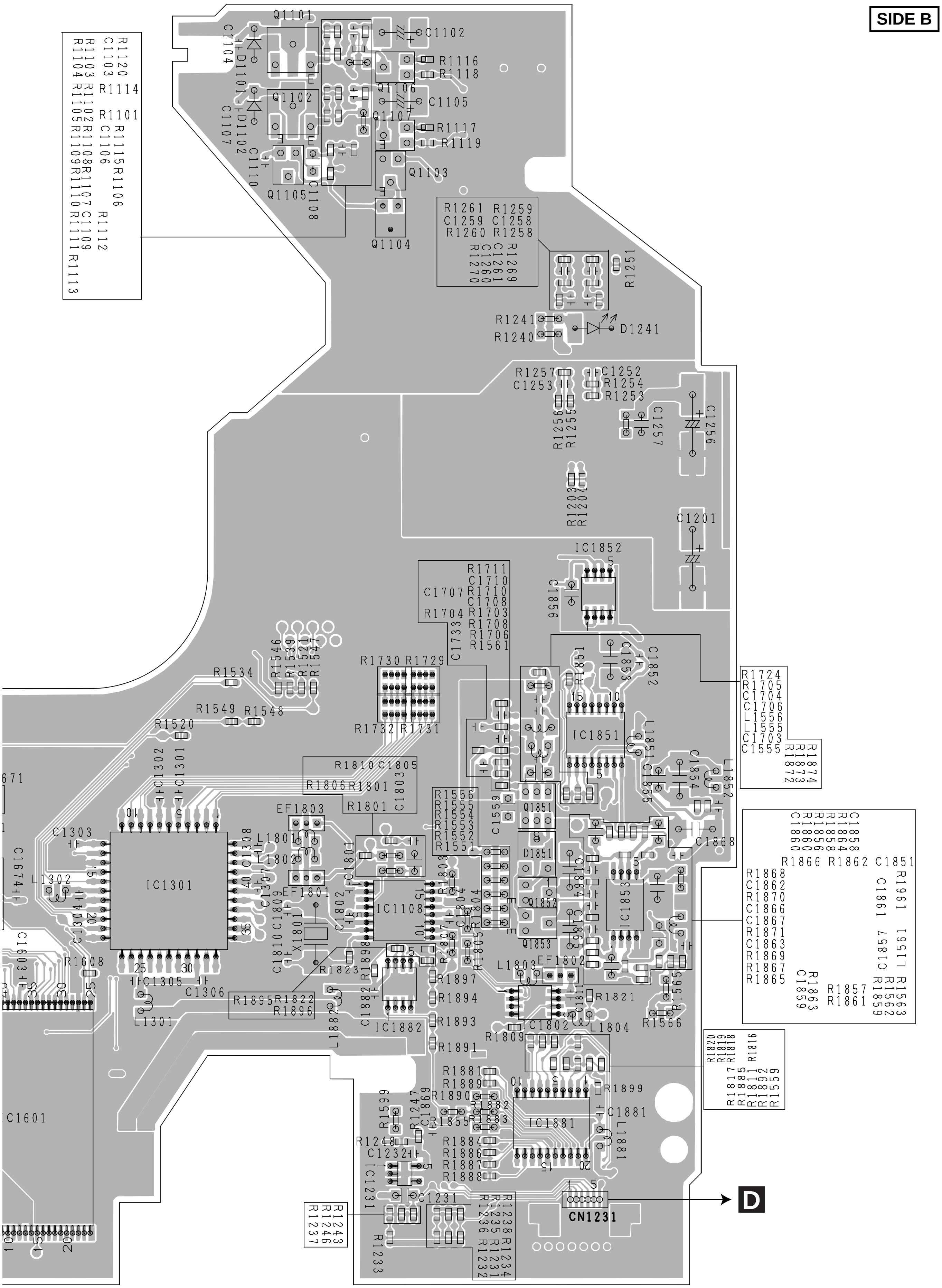
C DVD CORE UNIT


R1103 R1102 R1108 R1107 C1109
R1104 R1105 R1109 R1110 R1111 R1113


R1673 R1672 R1671
R1674
C1672
C1671
C1303
C1674
L1302
L1671
R1675
IC1671
C1675
C1676
IC1672
C1603
R1608
R1613
C1673
EF1901 EF1902 EF1903 EF1904
L1902 L1903
R1652
C1654
R1953
IC1651
C1653
IC1652
C1655
C1903
R1002
R1998
R1908
R1920
C1601
IC1602
L1601
IC1601
R1999
EF1902
R1901 R1903 R1907
R1603
R1604
C1651
R1913
L1901
R1912
R1911
L1904
L1905
R1954 R1955
R1921 R1922
R1924
L1651
R1926
R1925

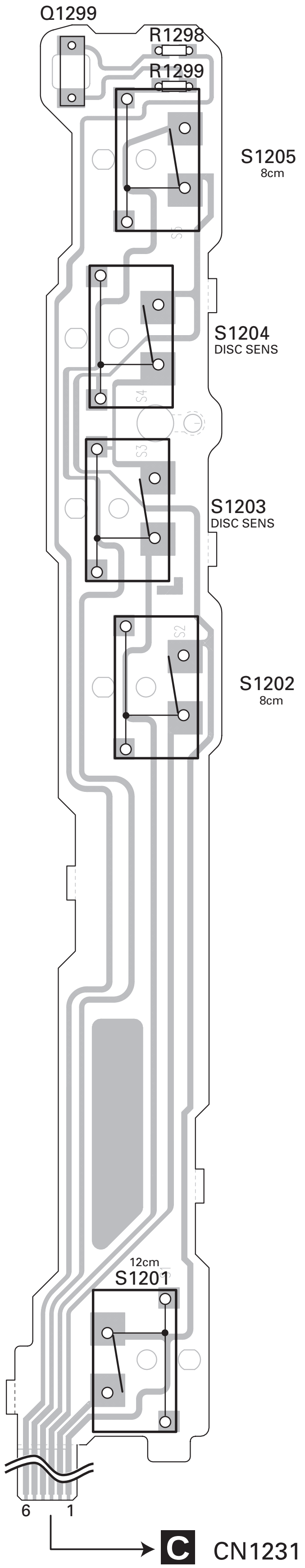
C

78

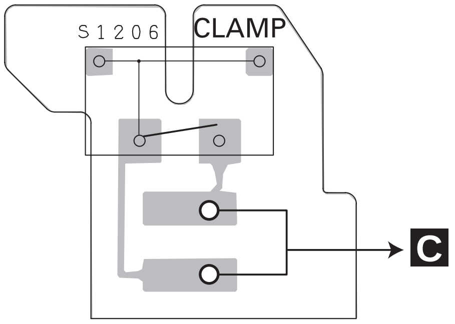

SIDE B
Q1101
Q1102
Q1103
Q1104
Q1105
Q1106
Q1107
C1102
C1105
R1116
R1118
R1117
R1119
D1101
D1102
C1104
C1107
C1108
C1110
R1120 C1103 R1114 R1101 R1115 R1106 C1106 R1112
R1103 R1102 R1108 R1107 C1109
R1104 R1105 R1109 R1110 R1111 R1113
R1261 R1259
C1259 C1258
R1260 R1258
R1269 C1261 C1260 R1270
R1251
R1241
R1240
D1241
R1257 C1252
C1253 R1254
R1253
R1256 R1255
C1257
C1256
R1203 R1204
C1201
IC1852
C1856
R1711 C1710 C1707 R1710 C1708 R1704 R1703 R1708 R1706 R1561 C1733
R1546 R1539 R1521 R1547
R1534
R1730 R1729
R1732 R1731
R1549 R1548
R1520
R1851
C1853
C1852
IC1851
L1851
C1854
C1855
L1852
R1724 R1705 C1704 C1706 L1556 L1555 C1703 C1555 R1874 R1873 R1872
R1810 C1805
R1806 R1801
R1801
C1803
C1302
C1301
C1303
IC1301
C1308
L1801
L1802
C1307
EF1803
EF1801
C1801
C1809
C1810
X1801
C1802
IC1108
R1803
C1804
R1804
R1807
R1805
R1556 R1555 R1554 R1553 R1552 R1551
C1559
Q1851
D1851
Q1852
Q1853
C1864
C1863
IC1853
C1868
C1858 R1864 R1858 R1856 R1860 C1860
R1866 R1862 C1851
R1868 C1862 R1870 C1866 C1867 R1871 C1863 R1869 R1867 R1865
R1961 C1861 L1951 C1857
R1863 C1859 R1857 R1861 R1563 R1562 R1559
L1803
EF1802
R1821
C1811
R1565
R1566
L1804
IC1802
R1809
R1820 R1819 R1818 R1816 R1817 R1885 R1811 R1892 R1559
671
L1302
C1674
C1304
C1603
C1305
C1306
L1301
R1608
C1601
R1895 R1822
R1896
R1823
R1898
R1897
R1894
R1893
R1891
C1882
L1882
IC1882
R1881
R1889
R1890
R1882
R1883
R1855
R1599
R1247
C1869
R1248
C1232
IC1231
R1884
R1886
R1887
R1888
IC1881
R1899
C1881
L1881
C1231
R1238 R1234
R1235 R1231
R1236 R1232
R1243 R1246 R1237
R1233
CN1231
D
1 5 10 15 20 25 30 35 40

4.4 COMPOUND UNIT(A) , COMPOUND UNIT(B) ANP RELAY PCB

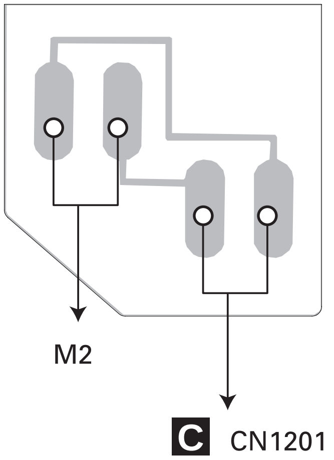
D COMPOUND UNIT(A)


Q1299
R1298
R1299
S1205
8cm
S1204
DISC SENS
S4
S3
S1203
DISC SENS
S2
S1202
8cm
12cm
S1201
6
1
C
CN1231

E COMPOUND UNIT(B)


S1206
CLAMP
C

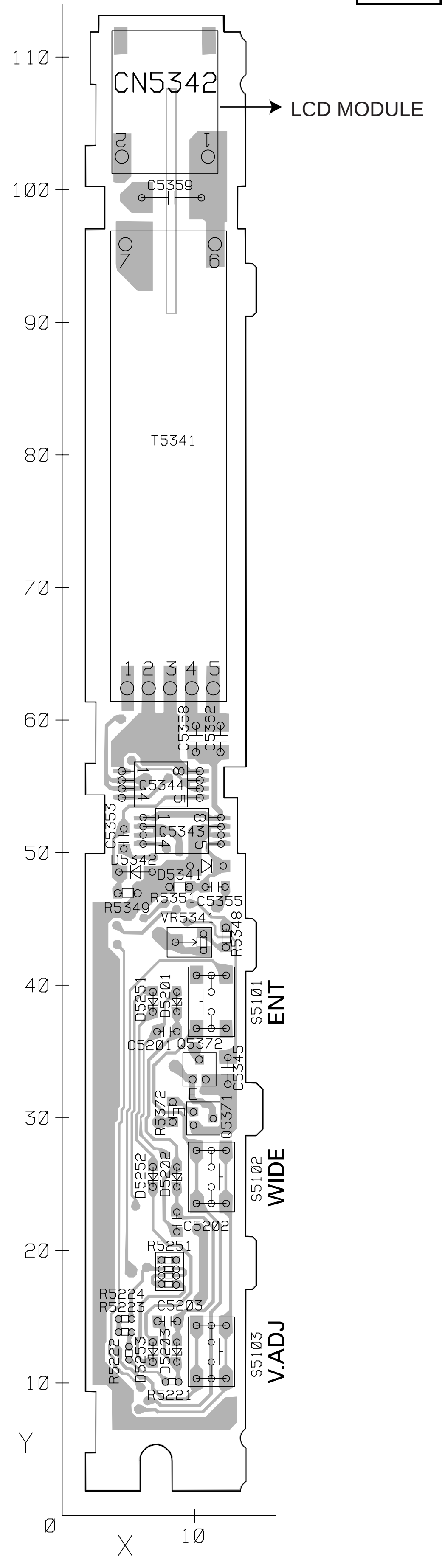
M RELAY PCB



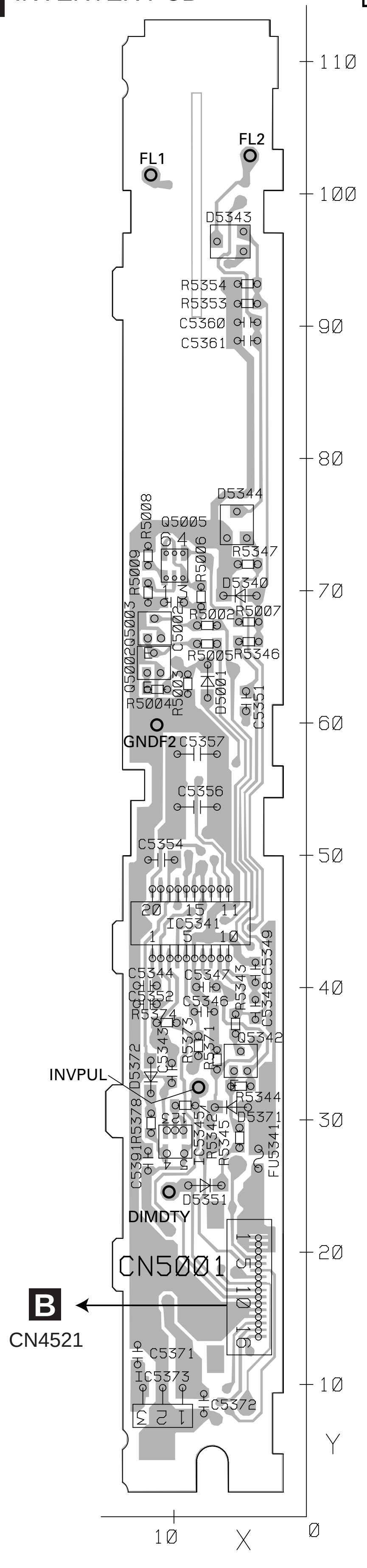
D E M

4.5 INVERTER PCB

F INVERTER PCB **SIDE A**


CN5342
LCD MODULE
C5359
T5341
C5358
C5362
Q5344
Q5343
C5353
D5342
D5341
R5349
R5351
C5355
VR5341
R5348
D5251
D5201
S5101
ENT
C5201
Q5372
C5345
R5372
Q5371
D5252
D5202
S5102
WIDE
C5202
R5251
R5224
R5223
C5203
R5222
D5253
D5203
S5103
V.ADJ
R5221
Y
X
110
100
90
80
70
60
50
40
30
20
10
0
10

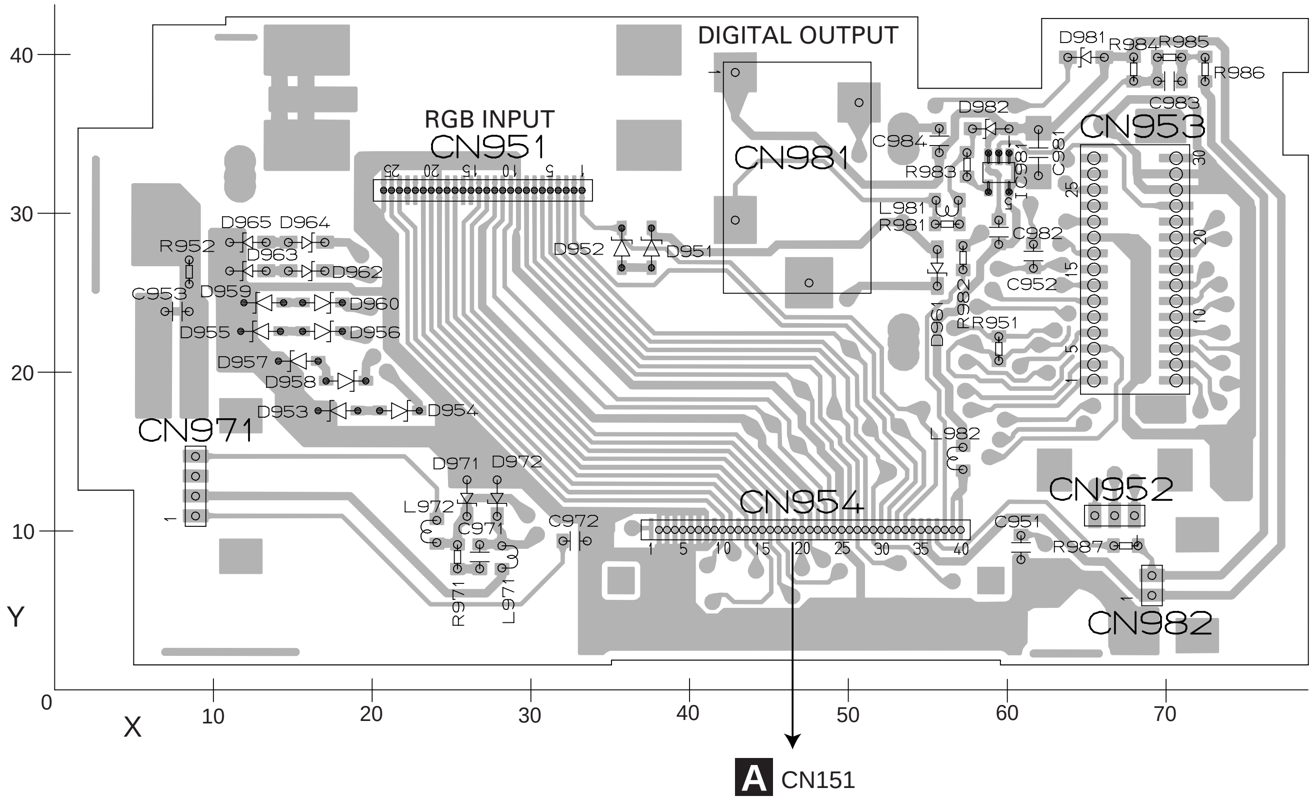
F INVERTER PCB **SIDE B**


FL1
FL2
D5343
R5354
R5353
C5360
C5361
D5344
R5008
Q5005
R5006
R5009
R5347
D5340
Q5003
R5002
R5007
C5002
Q5002
R5005
R5346
R5003
D5001
C5351
R5004
GNDF2
C5357
C5356
C5354
IC5341
C5349
C5344
C5347
C5352
C5346
C5348
R5343
R5374
C5343
R5373
R5371
Q5342
INVPUL
D5372
R5344
C5371
R5378
C5391
IC5345
R5342
R5345
FU5341
D5351
DIMDTY
CN5001
B
CN4521
C5371
IC5373
C5372
Y
X
110
100
90
80
70
60
50
40
30
20
10
0
10

4.6 RGB UNIT

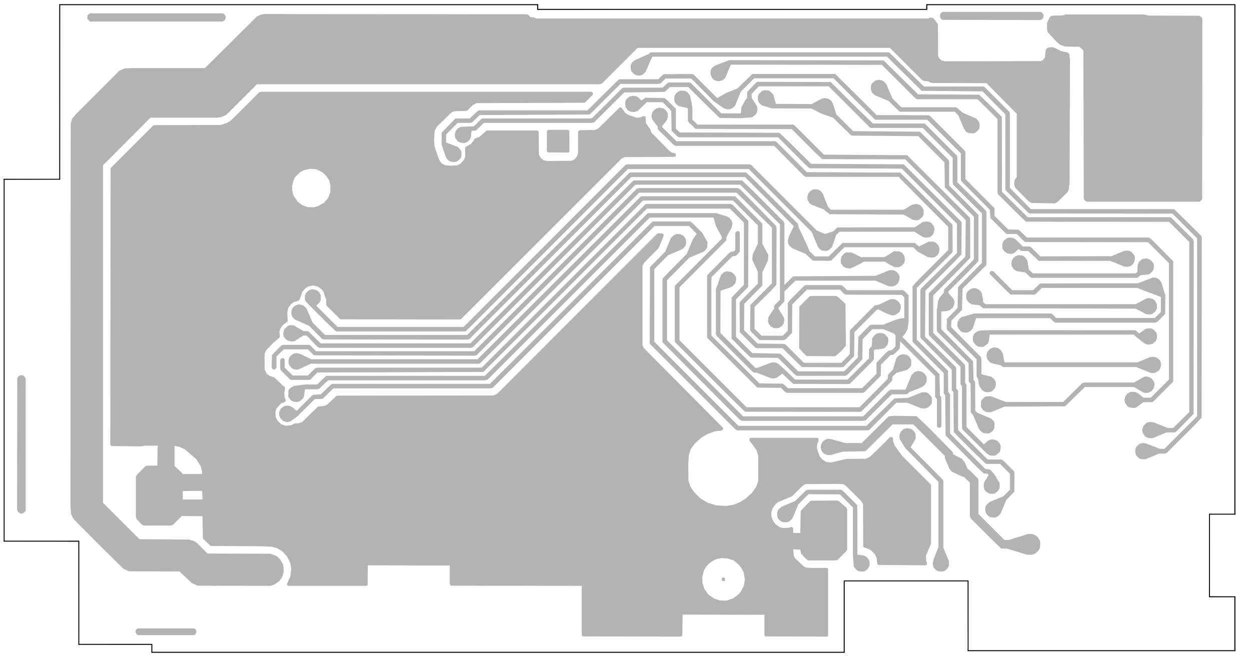
G RGB UNIT

SIDE A


DIGITAL OUTPUT
RGB INPUT
CN951
25 20 15 10 5 1
CN981
CN953
30 25 20 15 10 5 1
D981
R984
R985
R986
C983
D982
C984
R983
IC981
C981
L981
R981
C982
C952
D961
R982
R951
D952
D951
D965
D964
R952
D963
D962
C953
D959
D960
D955
D956
D957
D958
D953
D954
CN971
L982
D971
D972
L972
C971
C972
CN954
1 5 10 15 20 25 30 35 40
C951
R987
CN952
CN982
R971
L971
40
30
20
10
Y
0
10 20 30 40 50 60 70
X
A CN151

G RGB UNIT

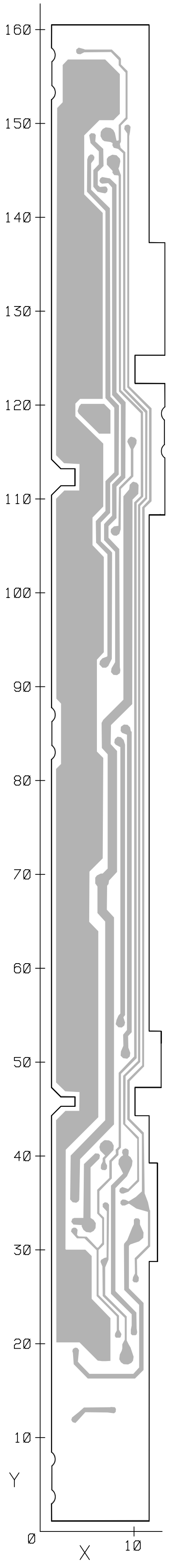
SIDE B



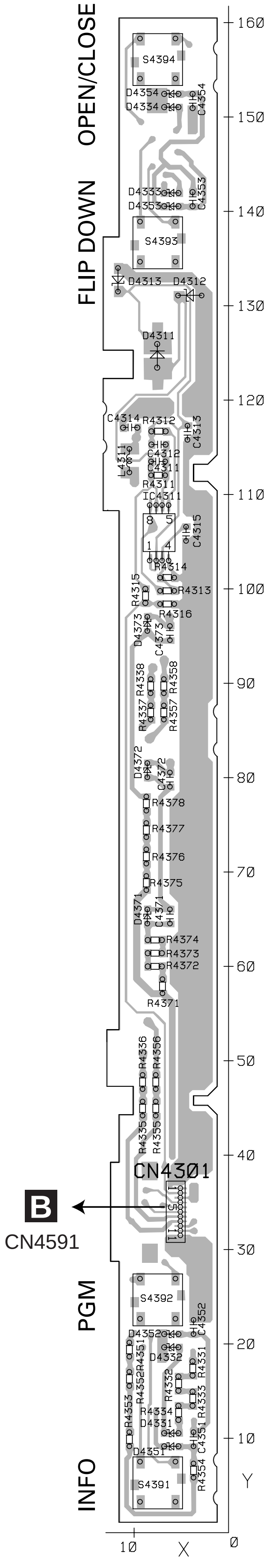
G

4.7 UPPER PCB

H UPPER PCB **SIDE A**


160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
Y
0
X
10

H UPPER PCB **SIDE B**

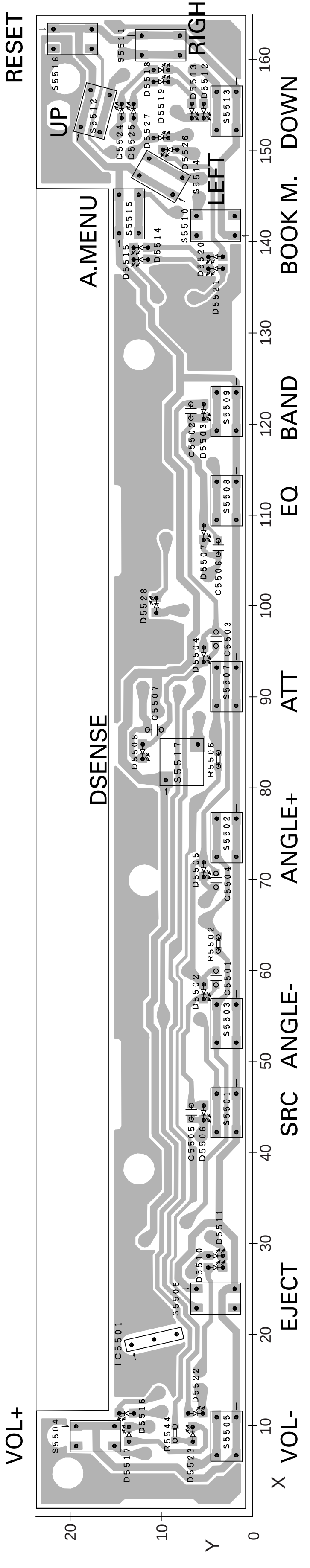

OPEN/CLOSE
FLIP DOWN
PGM
INFO
S4394
D4354
D4334
C4354
D4333
D4353
C4353
S4393
D4313
D4312
D4311
C4314
R4312
C4313
L4311
C4312
C4311
R4311
IC4311
8
5
1
4
C4315
R4314
R4315
R4313
R4316
D4373
C4373
R4338
R4358
R4337
R4357
D4372
C4372
R4378
R4377
R4376
R4375
D4371
C4371
R4374
R4373
R4372
R4371
R4336
R4356
R4335
R4355
CN4301
1
11
B
CN4591
S4392
D4352
C4352
R4351
D4332
R4352
R4332
R4331
R4353
R4334
R4333
D4331
C4351
D4351
R4354
S4391
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
Y
10
X
0

A
B
C
D
E
F

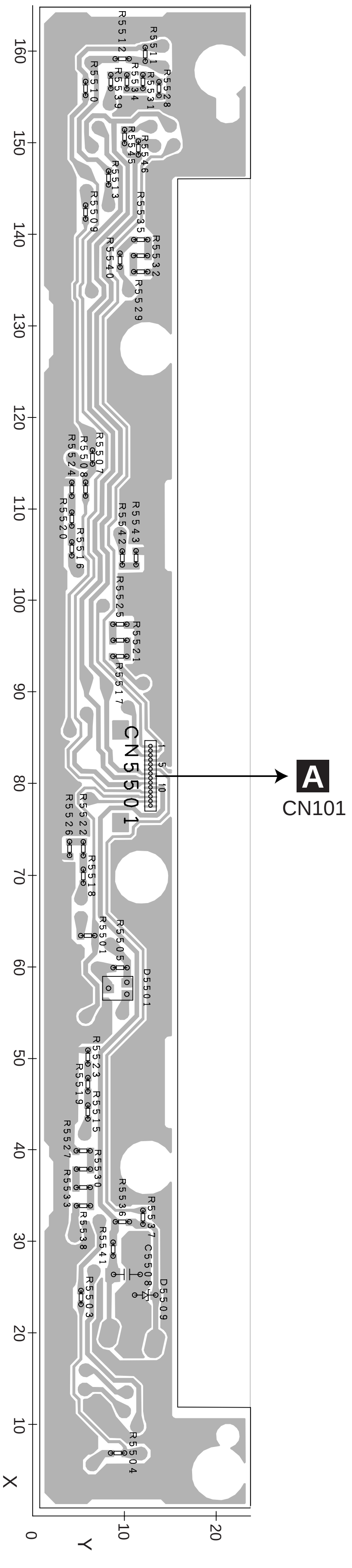
H

4.8 KEYBOARD UNIT

I KEYBOARD UNIT **SIDE A**

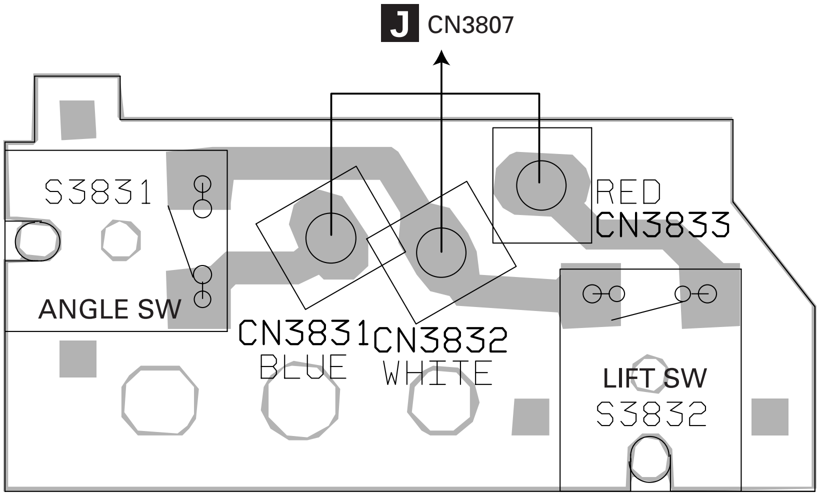

RESET
RIGHT
UP
DOWN
LEFT
A.MENU
BOOK M.
BAND
EQ
ATT
DSENSE
ANGLE+
ANGLE-
SRC
EJECT
VOL+
VOL-
S5516
S5511
S5512
S5513
S5514
S5515
S5510
S5509
S5508
S5507
S5517
S5502
S5503
S5501
S5506
S5504
S5505
D5518
D5519
D5513
D5512
D5524
D5525
D5527
D5526
D5515
D5514
D5520
D5521
C5502
D5503
D5507
C5506
D5528
D5504
C5503
C5507
D5508
R5506
D5505
C5504
R5502
D5502
C5501
C5505
D5506
D5510
D5511
IC5501
D5522
D5516
R5544
D5517
D5523
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
X
20
10
Y
0

I KEYBOARD UNIT **SIDE B**

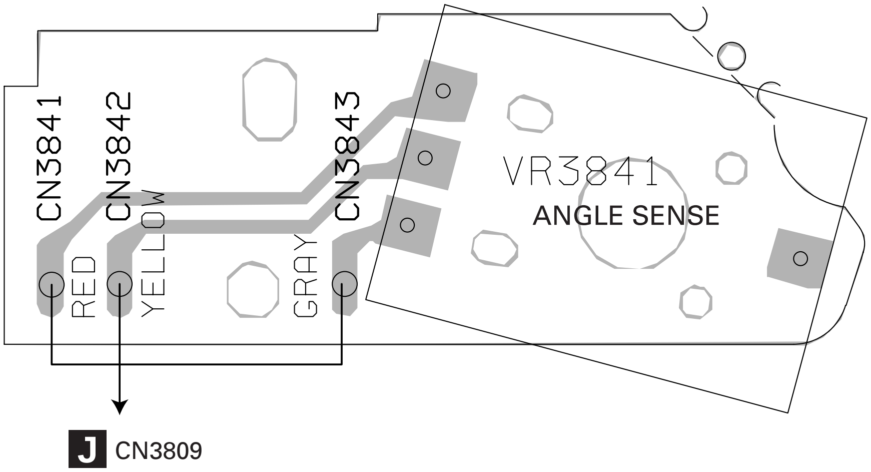

160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
X
0
10
Y
20
R5512
R5511
R5528
R5531
R5534
R5510
R5539
R5545
R5546
R5513
R5509
R5535
R5532
R5540
R5529
R5507
R5508
R5524
R5520
R5543
R5542
R5516
R5525
R5521
R5517
CN5501
1
5
10
A
CN101
R5522
R5526
R5518
R5501
R5505
D5501
R5523
R5519
R5515
R5527
R5530
R5533
R5536
R5537
R5538
R5541
C5508
D5509
R5503
R5504

4.9 SW UNIT AND VOLUME UNIT

K SW UNIT


J CN3807
S3831
ANGLE SW
CN3831
BLUE
CN3832
WHITE
RED
CN3833
LIFT SW
S3832

L VOLUME UNIT

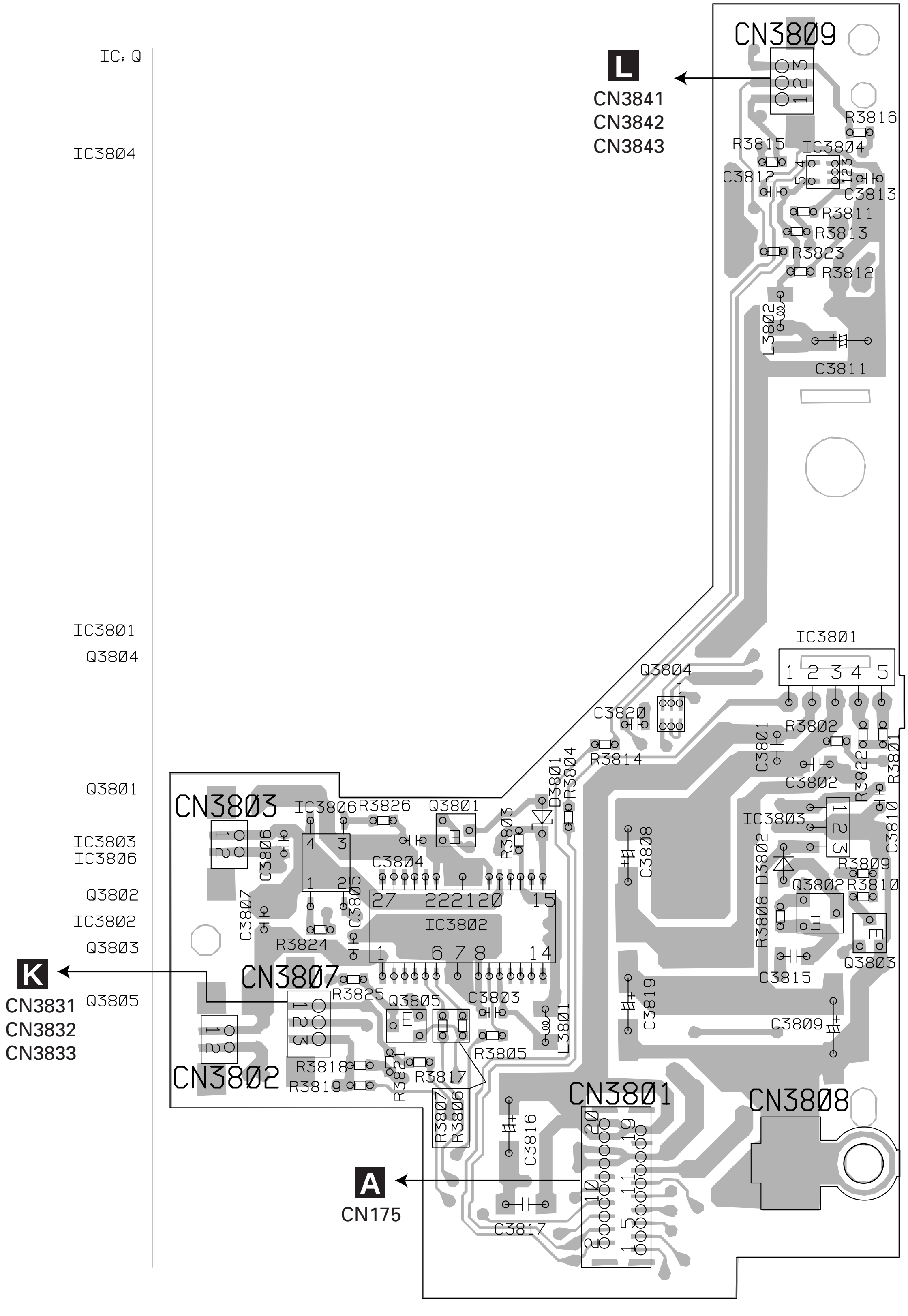

CN3841
CN3842
CN3843
RED
YELLOW
GRAY
VR3841
ANGLE SENSE
J CN3809

K L

4.10 MAIN UNIT

J MAIN UNIT

SIDE A


IC, Q
IC3804
IC3801
Q3804
Q3801
IC3803
IC3806
Q3802
IC3802
Q3803
Q3805
L
CN3841
CN3842
CN3843
CN3809
R3816
R3815
IC3804
C3812
C3813
R3811
R3813
R3823
R3812
L3802
C3811
IC3801
Q3804
C3820
R3814
R3802
C3801
C3802
R3822
R3801
D3801
R3804
CN3803
IC3806
R3826
Q3801
R3803
IC3803
C3810
D3802
C3808
R3809
Q3802
R3810
C3806
C3804
C3805
C3807
IC3802
R3824
R3808
Q3803
C3815
K
CN3831
CN3832
CN3833
CN3807
R3825
Q3805
C3803
C3819
L3801
C3809
R3805
CN3802
R3818
R3819
R3821
R3817
R3807
R3806
CN3801
CN3808
C3816
A
CN175
C3817

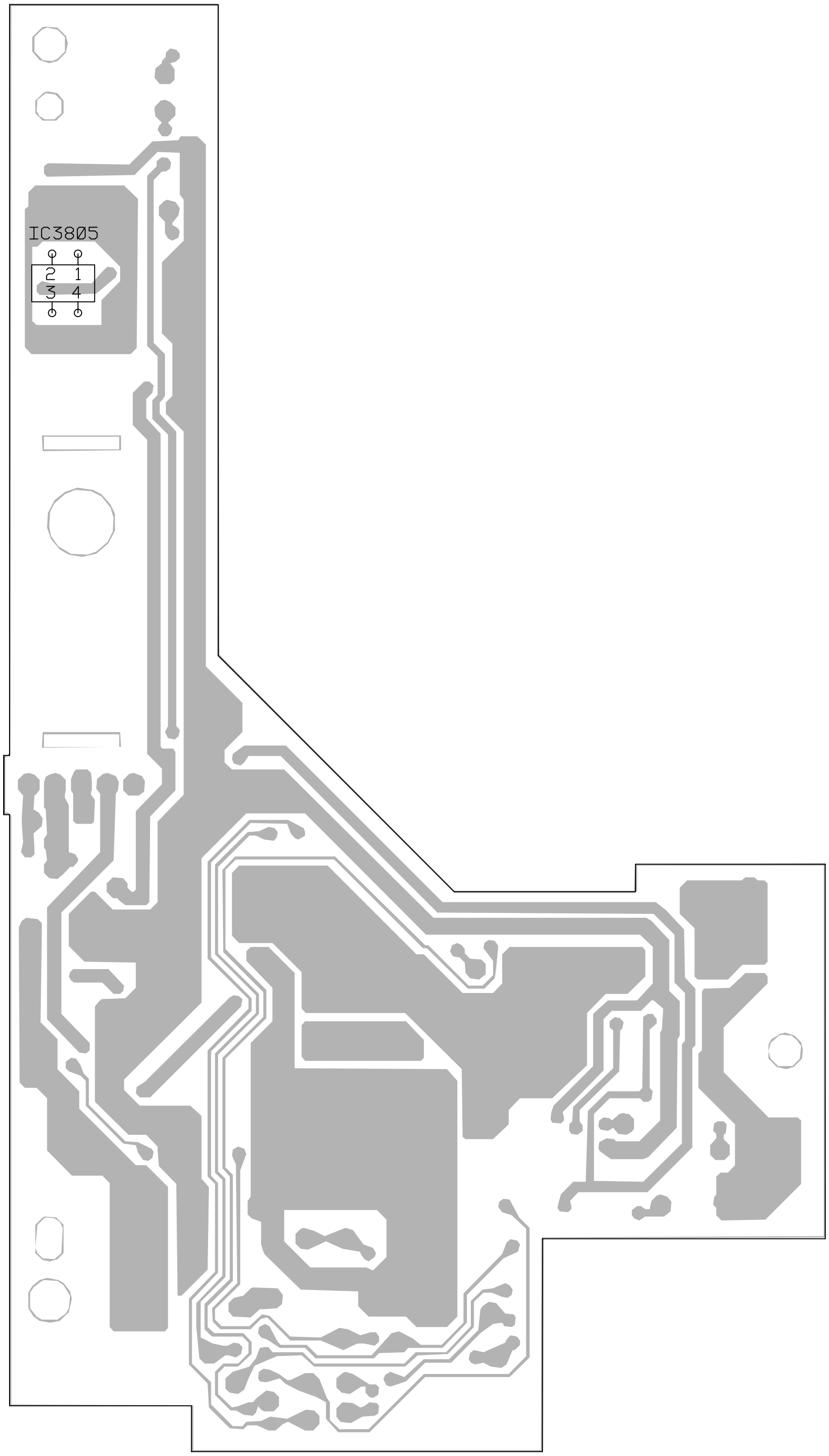
J

J MAIN UNIT

SIDE B

IC, Q

IC3805


IC3805
2 1
3 4

5. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*
  - *Chip Resistor*
    - *RS1/○S○○○J,RS1/○○S○○○J*
  - *Chip Capacitor (except for CQS.....)*
    - *CKS....., CCS....., CSZS.....*
- *The ⚠ mark found on some component parts indicatesthe importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Meaning of the figures and others in the parentheses in the parts list.*
  Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.
  IC 301 (A, 91, 111) IC NJM2068V

Circuit Symbol and No. **Part No.**

AVH-P5750DVD/RC

Mother Unit : CWM9811
Monitor Unit : CWM9822
Monitor PCB : NSP
Inverter PCB : NSP
Upper PCB : NSP
Keyboard Unit : NSP
RGB Unit : CWM9817
DVD Core Unit : CWX3170
Compound Unit(A) : CWX3156
Compound Unit(B) : CWX3154
Main Unit : CZW3087
SW Unit : CZW3088
Volume Unit : CZW3089

AVH-P5750DVD/RD

Mother Unit : CWM9812
Monitor Unit : CWM9822
Monitor PCB : NSP
Inverter PCB : NSP
Upper PCB : NSP
Keyboard Unit : NSP
RGB Unit : CWM9817
DVD Core Unit : CWX3170
Compound Unit(A) : CWX3156
Compound Unit(B) : CWX3154
Main Unit : CZW3087
SW Unit : CZW3088
Volume Unit : CZW3089

AVH-P5750DVD/RI

Mother Unit : CWM9810
Monitor Unit : CWM9822
Monitor PCB : NSP

Circuit Symbol and No. **Part No.**

Inverter PCB : NSP
Upper PCB : NSP
Keyboard Unit : NSP
RGB Unit : CWM9817
DVD Core Unit : CWX3170
Compound Unit(A) : CWX3156
Compound Unit(B) : CWX3154
Main Unit : CZW3087
SW Unit : CZW3088
Volume Unit : CZW3089

A

Unit Number:CWM9811(RC)
Unit Number:CWM9812(RD)
Unit Number:CWM9810(RI)
Unit Name:Mother Unit

MISCELLANEOUS

IC 121	(B,115,96) IC	HA12240FP
IC 151	(B,42,94) IC	TC4S81F
IC 181	(A,46,81) IC	TC74VHC08FTS1
IC 182	(A,50,82) IC	TC7SET08FUS1
IC 201	(B,145,63) IC	PML009A
IC 241	(A,155,128) IC	PAL007B
IC 301	(B,127,91) IC	NJM4558V
IC 302	(B,138,84) IC	NJM4558V
IC 303	(B,136,97) IC	NJM4580V
IC 421	(B,126,51) IC	NJM4558MD
IC 441	(A,147,46) IC	TA2050F
IC 451	(A,132,46) IC	TA2050F
IC 461	(B,59,86) IC	NJM2138V
IC 501	(B,145,14) IC	CXA2089Q
IC 521	(A,162,17) IC	NJM2136V
IC 522	(A,160,29) IC	BA7623F
IC 541	(B,36,72) IC	SM5304AV
IC 551	(B,127,17) IC	NJM2136V
IC 561	(B,124,31) IC	NJM2136V
IC 571	(B,135,31) IC	NJM2136V

Circuit Symbol and No.		Part No.
IC 581	(B,146,31) IC	NJM2136V
IC 601	(B,87,81) IC	PE5485A
IC 681	(B,94,43) IC	S-80841CNUA-B82
IC 801	(A,41,40) IC	AN8011S
IC 831	(B,19,92) IC	BA00BC0WFP
IC 841	(B,112,24) IC	S-812C50AUA-C3E
IC 851	(A,70,21) IC	S-818A35AUC-BGP
IC 856	(A,57,64) IC	S-814A33AMC-BCX
IC 871	(A,168,100) IC	NJM2388F84
IC 881	(B,25,146) IC	NJM2391DL1-33
Q 101	(B,97,29) Transistor	UMF23N
Q 121	(B,123,107) Transistor	UMF23N
Q 131	(A,83,109) Transistor	2SC4081
Q 151	(B,49,102) Transistor	2SC4081
Q 181	(B,47,76) Transistor	IMD2A
Q 182	(B,47,73) Transistor	IMX9
Q 241	(B,146,88) Transistor	DTC124EU
Q 242	(B,146,93) Transistor	DTC144EU
Q 243	(B,150,84) Transistor	IMD2A
Q 244	(A,147,84) Transistor	2SC4081
Q 245	(B,152,77) Transistor	IMD2A
Q 261	(A,116,106) Transistor	IMX9
Q 262	(A,109,106) Transistor	IMX9
Q 301	(B,133,83) Transistor	IMD2A
Q 302	(B,132,86) Transistor	DTC323TU
Q 303	(B,126,81) Transistor	DTC124EU
Q 461	(A,59,82) Transistor	2SC4081
Q 511	(A,135,5) Transistor	2SC4081
Q 512	(A,125,8) Transistor	2SA1577
Q 521	(B,161,19) Transistor	2SC4081
Q 551	(A,125,14) Transistor	2SC4081
Q 561	(A,124,28) Transistor	2SC4081
Q 571	(A,134,28) Transistor	2SC4081
Q 581	(A,145,28) Transistor	2SC4081
Q 601	(B,104,83) Transistor	DTC124EU
Q 691	(A,107,55) Transistor	DTA114EU
Q 692	(A,112,52) Transistor	DTC144EU
Q 694	(B,109,49) Transistor	2SC4081
Q 695	(B,112,49) Transistor	2SC4081
Q 701	(B,12,19) Transistor	2SA1615-Z
Q 702	(B,9,29) Transistor	DTC114EU
Q 703	(A,142,104) Transistor	2SA1576
Q 704	(A,138,105) Transistor	2SC4081
Q 705	(A,133,102) Transistor	IMX1
Q 706	(A,142,109) Transistor	2SA1576
Q 751	(B,50,11) Transistor	2SA1577
Q 752	(B,50,9) Transistor	DTC144EU
Q 755	(B,44,11) Transistor	2SA1577
Q 756	(B,44,9) Transistor	DTC144EU
Q 771	(B,72,146) Transistor	2SD1760F5
Q 772	(B,67,139) Transistor	DTC144EU
Q 773	(B,61,148) Transistor	UMF5N
Q 774	(B,62,141) Transistor	DTC144EU
Q 781	(B,67,45) Transistor	2SD1760F5
Q 782	(B,73,46) Transistor	UMF5N
Q 783	(B,72,37) Transistor	DTC114EU
Q 801	(A,27,44) Transistor	2SJ529S
Q 802	(A,53,41) Transistor	2SJ529S
Q 803	(A,33,43) Transistor	2SC4097
Q 804	(A,48,48) Transistor	2SC4097

Circuit Symbol and No.		Part No.
Q 805	(B,44,37) Transistor	DTC124EU
Q 806	(B,51,39) Transistor	DTC114EU
Q 841	(B,108,34) Transistor	2SB1184F5
Q 842	(A,156,56) Transistor	2SD1767
Q 861	(A,72,14) Transistor	UMF5N
Q 864	(A,66,98) Transistor	UMF5N
Q 867	(A,99,25) Transistor	UMF5N
Q 891	(B,163,80) Transistor	2SD1767
Q 892	(A,167,115) Transistor	2SD2396
Q 893	(B,155,107) Transistor	IMD2A
D 101	(A,98,22) Diode	UDZS5R6(B)
D 107	(B,94,26) Diode	UDZS5R6(B)
D 151	(B,46,93) Diode Network	DA204U
D 152	(B,42,97) Diode Network	DA204U
D 241	(B,144,85) Diode	DAN202U
D 242	(B,156,79) Diode	RSX201L-30
D 243	(B,144,82) Diode	DAN202U
D 244	(A,146,89) Diode	1SS355
D 245	(A,159,71) Diode	UDZS8R2(B)
D 246	(B,149,81) Diode	DAN202U
D 421	(B,123,57) Diode	UDZS3R9(B)
D 681	(B,100,44) Diode	1SS355
D 691	(B,109,53) Diode	1SS355
D 692	(B,113,53) Diode	1SS355
D 701	(B,130,152) Diode	S1G-6904G2P
D 702	(B,124,152) Diode	S1G-6904G2P
D 703	(A,139,102) Diode	DAN202U
D 704	(B,132,108) Diode	UDZS6R8(B)
D 705	(A,136,108) Diode	HZU7L(A1)
D 706	(B,126,111) Diode	HZU7L(C3)
D 707	(B,139,105) Diode	DAN202U
D 708	(A,103,138) Diode	5KP24A
D 771	(B,70,141) Diode	HZU9R1(B2)
D 772	(B,65,142) Diode	HZU6R8(B3)
D 773	(B,62,145) Diode	HZU8R2(B2)
D 781	(B,73,42) Diode	HZU7R5(B2)
D 782	(B,69,37) Diode	HZU6R8(B3)
D 801	(A,37,32) Diode	RSX201L-30
D 802	(A,52,34) Diode	RSX201L-30
D 803	(A,33,46) Diode	MA111
D 804	(A,47,45) Diode	MA111
D 805	(A,111,132) Diode	RSX201L-30
D 806	(A,107,129) Diode	RSX201L-30
D 831	(B,26,60) Diode	S2G-6600
D 841	(A,139,56) Diode	1SR154-400
D 842	(A,157,52) Diode	UDZS18(B)
D 851	(A,66,26) Diode	SC802-06
D 881	(B,40,143) Diode	1SR154-400
D 882	(B,45,141) Diode	1SR154-400
D 883	(B,48,146) Diode	1SR154-400
D 891	(B,165,73) Diode	UDZS5R6(B)
D 892	(B,152,104) Diode	HZU9R1(B3)
ZNR401	(B,9,99) Surge Protector	RCCA-201Q31UA-PI
L 101	(A,99,19) Inductor	CTF1399
L 121	(B,117,91) Inductor	LCTC2R2K1608
L 151	(A,65,96) Inductor	CTF1473
L 171	(A,14,63) Inductor	CTF1383
L 172	(A,6,55) Inductor	CTF1473
L 181	(A,35,79) Inductor	CTF1473
L 182	(A,35,81) Inductor	CTF1473

Circuit Symbol and No.	Part No.
L 183 (B,31,88) Inductor	CTF1399
L 184 (A,43,86) Inductor	CTF1305
L 185 (A,50,77) Inductor	CTF1305
L 187 (A,40,86) Inductor	CTF1473
L 201 (A,135,69) Inductor	LCTAW2R2J2520
L 301 (A,130,90) Inductor	CTF1399
L 302 (B,135,79) Inductor	CTF1399
L 303 (A,133,92) Inductor	CTF1399
L 401 (B,63,128) Chip Coil	LCTAW1R0J2520
L 402 (A,37,104) Chip Coil	LCTAW1R0J2520
L 403 (B,9,102) Chip Coil	LCTAW4R7J2520
L 404 (A,68,103) Inductor	CTF1473
L 405 (B,59,109) Inductor	CTF1473
L 421 (B,130,58) Inductor	CTF1399
L 441 (A,153,51) Inductor	CTF1399
L 451 (A,139,51) Inductor	CTF1399
L 461 (A,63,91) Inductor	CTF1399
L 501 (B,160,12) Chip Coil	LCTAW100J2520
L 511 (A,133,11) Inductor	CTF1399
L 521 (A,167,21) Inductor	CTF1399
L 522 (A,167,29) Inductor	LCTAW150J2520
L 523 (B,118,115) Inductor	CTF1383
L 541 (B,43,68) Inductor	CTF1399
L 551 (B,125,11) Inductor	CTF1399
L 561 (B,123,24) Inductor	CTF1399
L 571 (B,135,23) Inductor	CTF1399
L 581 (B,145,25) Inductor	CTF1399
L 601 (B,82,95) Inductor	CTF1306
L 602 (B,84,95) Inductor	CTF1306
L 603 (B,94,62) Inductor	LCTAW2R2J2520
L 604 (B,77,97) Inductor	CTF1473
L 701 (A,24,58) Coil	CTH1267
L 702 (A,22,8) Inductor	CTH1262
L 703 (B,143,101) Inductor	LCTC2R2K1608
L 704 (B,132,110) Inductor	CTF1295
L 705 (B,138,108) Inductor	LCTC2R2K1608
L 801 (A,29,33) Coil	CTH1303
L 802 (A,52,28) Coil	CTH1303
L 803 (A,49,61) Inductor	CTH1253
L 804 (A,38,49) Chip Coil	LCTAW100J2520
L 851 (A,75,22) Inductor	CTF1383
L 856 (A,59,66) Inductor	CTF1383
X 601 (B,103,91)Radiator 18.874368MHz	CSS1622
VR511 (A,130,13)Semi-fixed 1.5kΩ(B)	CCP1391
VR801 (A,45,31) Semi-fixed 10kΩ(B)	CCP1396
⚠ FU131 (B,94,115) Fuse 3A	CEK1286
⚠ FU151 (B,41,102) Fuse 3A	CEK1286
⚠ FU152 (A,95,132) Fuse 3A	CEK1286
⚠ FU175 (A,15,71) Fuse 1.75A	CEK1283
⚠ FU176 (B,62,68) Fuse 1A	CEK1280
⚠ FU261 (B,104,127) Fuse 3A	CEK1286
⚠ FU701 (A,16,53) Fuse 1.25A	CEK1281
⚠ FU702 (A,17,16) Fuse 1.75A	CEK1283
⚠ FU703 (B,126,149) Fuse 3A	CEK1286
⚠ FU771 (B,64,147) Fuse 1A	CEK1280
⚠ FU781 (A,76,36) Fuse 1A	CEK1280
⚠ FU801 (A,27,27) Fuse 2.5A	CEK1285
⚠ FU802 (A,54,22) Fuse 2.5A	CEK1285
⚠ FU803 (A,57,59) Fuse 2.5A	CEK1285
⚠ FU861 (A,101,31) Fuse 1A	CEK1280

Circuit Symbol and No.	Part No.
BZ601 (A,83,10) Buzzer	CPV1063

RESISTORS

Circuit Symbol and No.	Part No.
R 101 (B,72,26)	RS1/16S472J
R 102 (B,72,27)	RS1/16S472J
R 103 (B,70,29)	RS1/16S472J
R 104 (B,75,30)	RAB4C222J
R 105 (B,89,42)	RS1/16S102J
R 106 (B,91,42)	RS1/16S102J
R 107 (B,95,35)	RS1/16S222J
R 108 (B,98,26)	RS1/16S332J
R 109 (B,100,28)	RS1/16S332J
R 121 (B,114,93)	RS1/16S102J
R 122 (B,120,96)	RS1/16S101J
R 123 (B,123,98)	RS1/16S150J
R 124 (B,125,98)	RS1/16S470J
R 125 (B,125,99)	RS1/16S101J
R 126 (B,122,110)	RS1/16S222J
R 127 (B,126,107)	RS1/16S332J
R 128 (B,124,104)	RS1/16S562J
R 131 (A,86,111)	RS1/16S473J
R 132 (A,83,112)	RS1/16S473J
R 133 (A,86,108)	RS1/16S473J
R 151 (B,52,98)	RS1/16S750J
R 152 (B,65,98)	RS1/16S750J
R 153 (B,60,98)	RS1/16S750J
R 154 (B,56,98)	RS1/16S750J
R 155 (B,44,102)	RS1/16S681J
R 156 (B,48,96)	RS1/16S473J
R 157 (B,46,102)	RS1/16S473J
R 158 (B,45,97)	RS1/16S681J
R 159 (B,48,92)	RS1/16S473J
R 160 (B,43,99)	RS1/16S473J
R 171 (B,5,52)	RS1/16S0R0J
R 172 (A,5,58)	RS1/16S0R0J
R 174 (A,15,56)	RS1/16S102J
R 175 (B,13,55)	RS1/16S0R0J
R 176 (B,11,54)	RS1/16S0R0J
R 177 (B,9,59)	RS1/16S0R0J
R 178 (A,5,53)	RS1/16S0R0J
R 179 (A,5,63)	RS1/16S0R0J
R 181 (A,40,82)	RAB4C102J
R 182 (A,36,85)	RAB4C102J
R 184 (A,46,74)	RS1/16S103J
R 185 (A,48,74)	RS1/16S103J
R 187 (B,43,71)	RS1/16S0R0J
R 188 (B,51,72)	RS1/16S0R0J
R 201 (B,137,53)	RS1/16S181J
R 202 (B,148,52)	RS1/16S181J
R 203 (B,135,55)	RS1/16S223J
R 204 (B,151,52)	RS1/16S223J
R 205 (B,135,56)	RS1/16S102J
R 206 (B,155,51)	RS1/16S102J
R 207 (B,140,51)	RS1/16S0R0J
R 208 (B,147,49)	RS1/16S0R0J
R 209 (B,136,60)	RS1/16S0R0J
R 210 (A,148,57)	RS1/16S0R0J
R 211 (B,130,71)	RS1/16S0R0J
R 212 (B,149,72)	RS1/16S0R0J

Circuit Symbol and No.		Part No.
R 213	(B,134,67)	RS1/16S0R0J
R 214	(B,154,71)	RS1/16S0R0J
R 215	(B,135,68)	RS1/16S0R0J
R 216	(B,156,69)	RS1/16S0R0J
R 217	(B,145,110)	RS1/16S471J
R 218	(B,150,113)	RS1/16S471J
R 241	(B,150,93)	RS1/16S103J
R 242	(B,146,90)	RS1/16S103J
R 243	(B,151,90)	RS1/16S221J
R 244	(B,141,108)	RS1/16S103J
R 245	(B,146,101)	RS1/16S473J
R 246	(B,149,90)	RS1/16S101J
R 247	(B,153,83)	RS1/16S222J
R 248	(A,148,87)	RS1/16S103J
R 249	(A,144,81)	RS1/16S104J
R 250	(A,143,84)	RS1/16S473J
R 251	(A,146,87)	RS1/16S101J
R 252	(B,155,74)	RS1/16S222J
R 261	(B,107,112)	RS1/16S821J
R 262	(B,103,112)	RS1/16S821J
R 263	(B,115,112)	RS1/16S821J
R 264	(B,111,109)	RS1/16S821J
R 265	(A,108,103)	RS1/16S103J
R 266	(A,111,103)	RS1/16S103J
R 267	(A,114,103)	RS1/16S103J
R 268	(A,118,103)	RS1/16S103J
R 269	(B,106,114)	RS1/16S223J
R 270	(B,103,114)	RS1/16S223J
R 271	(B,115,114)	RS1/16S223J
R 272	(B,111,114)	RS1/16S223J
R 287	(B,102,105)	RS1/16S0R0J
R 288	(B,97,105)	RS1/16S0R0J
R 289	(A,92,131)	RS1/16S0R0J
R 301	(B,121,90)	RS1/16S101J
R 302	(B,124,90)	RS1/16S473J
R 303	(B,124,93)	RS1/16S473J
R 304	(B,131,94)	RS1/16S472J
R 305	(B,127,95)	RS1/16S472J
R 306	(B,136,89)	RS1/16S473J
R 307	(B,137,89)	RS1/16S103J
R 308	(B,134,89)	RS1/16S103J
R 309	(B,131,89)	RS1/16S821J
R 310	(B,130,88)	RS1/16S473J
R 311	(A,136,97)	RS1/16S103J
R 312	(A,134,97)	RS1/16S103J
R 313	(B,145,96)	RS1/16S103J
R 314	(B,142,96)	RS1/16S103J
R 315	(B,141,83)	RS1/16S103J
R 316	(B,133,94)	RS1/16S103J
R 317	(A,138,97)	RS1/16S103J
R 318	(A,132,100)	RS1/16S103J
R 319	(B,143,110)	RS1/16S471J
R 320	(B,146,110)	RS1/16S471J
R 321	(B,139,90)	RS1/16S104J
R 322	(B,124,87)	RS1/16S473J
R 323	(B,127,85)	RS1/16S473J
R 324	(A,130,81)	RS1/16S473J
R 325	(B,125,84)	RS1/16S102J
R 401	(B,54,106)	RS1/16S681J
R 403	(B,38,109)	RS1/16S681J

Circuit Symbol and No.		Part No.
R 404	(B,37,109)	RS1/16S681J
R 405	(B,35,109)	RS1/16S681J
R 406	(B,34,109)	RS1/16S681J
R 407	(B,32,109)	RS1/16S681J
R 410	(A,30,6)	RS1/16S0R0J
R 421	(B,116,58)	RS1/16S103J
R 422	(B,117,58)	RS1/16S103J
R 423	(B,120,56)	RS1/16S103J
R 424	(B,120,57)	RS1/16S103J
R 427	(B,121,51)	RS1/16S103J
R 428	(B,131,51)	RS1/16S103J
R 429	(B,120,49)	RS1/16S103J
R 430	(B,133,49)	RS1/16S103J
R 431	(B,128,59)	RS1/16S681J
R 441	(B,151,39)	RS1/16S102J
R 442	(B,141,42)	RS1/16S102J
R 443	(B,148,41)	RS1/16S181J
R 444	(B,146,41)	RS1/16S181J
R 445	(B,150,41)	RS1/16S223J
R 446	(B,143,41)	RS1/16S223J
R 447	(A,141,24)	RS1/16S562J
R 448	(A,141,23)	RS1/16S562J
R 451	(B,137,41)	RS1/16S123J
R 452	(B,127,40)	RS1/16S123J
R 453	(B,133,41)	RS1/16S123J
R 454	(B,131,41)	RS1/16S123J
R 455	(B,134,41)	RS1/16S223J
R 456	(B,130,41)	RS1/16S223J
R 457	(B,136,41)	RS1/16S223J
R 458	(B,127,42)	RS1/16S223J
R 459	(B,120,44)	RS1/16S562J
R 460	(B,120,42)	RS1/16S562J
R 461	(B,51,91)	RS1/16S472J
R 462	(B,54,84)	RS1/16S472J
R 463	(B,53,91)	RS1/16S472J
R 464	(B,57,81)	RS1/16S472J
R 465	(B,55,91)	RS1/16S472J
R 466	(B,54,88)	RS1/16S472J
R 467	(B,57,91)	RS1/16S472J
R 468	(B,59,81)	RS1/16S472J
R 469	(B,66,91)	RS1/16S472J
R 470	(B,64,84)	RS1/16S472J
R 471	(B,64,91)	RS1/16S472J
R 472	(B,62,81)	RS1/16S472J
R 473	(B,62,91)	RS1/16S472J
R 474	(B,64,88)	RS1/16S472J
R 475	(B,60,91)	RS1/16S472J
R 476	(B,60,81)	RS1/16S472J
R 477	(A,54,77)	RS1/16S101J
R 478	(A,56,77)	RS1/16S101J
R 479	(A,59,77)	RS1/16S101J
R 480	(A,57,77)	RS1/16S101J
R 481	(A,54,79)	RS1/16S102J
R 482	(A,58,84)	RS1/16S272J
R 483	(A,54,82)	RS1/16S472J
R 491	(B,70,127)	RS1/16S0R0J
R 501	(B,155,8)	RS1/16S0R0J
R 502	(B,149,28)	RS1/16S272J
R 503	(B,127,28)	RS1/16S272J
R 504	(B,130,13)	RS1/16S272J

Circuit Symbol and No.		Part No.	Circuit Symbol and No.		Part No.
R 511	(A,136,8)	RS1/16S222J	R 586	(B,143,31)	RS1/16S472J
R 512	(A,137,10)	RS1/16S222J	R 587	(A,141,28)	RS1/16S102J
R 513	(A,132,8)	RS1/16S681J	R 588	(A,145,31)	RS1/16S272J
R 514	(A,132,6)	RS1/16S681J	R 589	(A,141,31)	RS1/16S472J
R 515	(A,130,9)	RS1/16S331J	R 590	(B,148,24)	RS1/16S0R0J
R 516	(A,128,9)	RS1/16S272J	R 601	(B,72,70)	RS1/16S102J
R 517	(A,129,6)	RS1/16S0R0J	R 602	(B,72,68)	RS1/16S102J
R 518	(A,17,64)	RS1/16S0R0J	R 603	(B,72,66)	RS1/16S102J
R 521	(A,160,12)	RS1/16S472J	R 604	(A,109,65)	RAB4C102J
R 522	(A,158,14)	RS1/16S472J	R 605	(B,112,68)	RS1/16S473J
R 523	(B,162,21)	RS1/16S272J	R 606	(B,69,75)	RAB4C102J
R 524	(B,164,19)	RS1/16S392J	R 607	(B,71,79)	RAB4C102J
R 526	(A,162,20)	RS1/16S101J	R 608	(B,68,80)	RS1/16S102J
R 527	(B,159,16)	RS1/16S472J	R 610	(B,98,57)	RS1/16S473J
R 528	(B,158,19)	RS1/16S102J	R 612	(B,98,46)	RS1/16S102J
R 529	(B,164,14)	RS1/16S472J	R 613	(B,92,18)	RS1/16S473J
R 530	(B,166,15)	RS1/16S101J	R 614	(B,93,16)	RS1/16S0R0J
R 531	(A,164,29)	RS1/16S473J	R 616	(A,77,100)	RS1/16S221J
R 532	(A,164,32)	RS1/16S333J	R 617	(B,88,112)	RS1/16S102J
R 533	(B,162,27)	RS1/16S560J	R 618	(B,88,115)	RS1/16S473J
R 534	(B,162,29)	RS1/16S150J	R 619	(B,90,112)	RS1/16S102J
R 543	(B,33,72)	RS1/16S332J	R 620	(B,90,115)	RS1/16S473J
R 546	(B,38,66)	RS1/16S101J	R 621	(B,96,99)	RS1/16S473J
R 547	(B,33,66)	RS1/16S102J	R 622	(B,96,97)	RS1/16S102J
R 548	(B,139,5)	RS1/16S0R0J	R 623	(B,96,17)	RAB4C102J
R 551	(A,127,24)	RS1/16S750J	R 624	(B,97,14)	RS1/16S473J
R 552	(A,126,21)	RS1/16S472J	R 625	(B,92,15)	RS1/16S473J
R 553	(A,128,21)	RS1/16S472J	R 627	(B,103,54)	RS1/16S102J
R 554	(B,130,11)	RS1/16S101J	R 628	(A,110,59)	RS1/16S102J
R 555	(A,128,17)	RS1/16S472J	R 629	(B,111,71)	RS1/16S104J
R 556	(B,124,17)	RS1/16S472J	R 630	(B,103,87)	RS1/16S151J
R 557	(A,122,13)	RS1/16S102J	R 631	(B,109,69)	RS1/16S104J
R 558	(A,125,18)	RS1/16S272J	R 632	(B,158,39)	RS1/16S472J
R 559	(A,123,19)	RS1/16S472J	R 633	(B,158,38)	RS1/16S472J
R 560	(B,133,9)	RS1/16S0R0J	R 634	(B,108,64)	RAB4C102J
R 561	(A,124,38)	RS1/16S750J	R 635	(B,103,80)	RS1/16S473J
R 562	(A,124,35)	RS1/16S472J	R 636	(B,108,84)	RS1/16S472J
R 563	(A,125,35)	RS1/16S472J	R 637	(B,109,71)	RS1/16S104J
R 564	(B,128,24)	RS1/16S101J	R 639	(B,108,72)	RS1/16S681J
R 565	(A,126,31)	RS1/16S472J	R 641	(B,105,72)	RS1/16S681J
R 566	(B,121,31)	RS1/16S472J	R 642	(B,101,73)	RS1/16S102J
R 567	(A,119,27)	RS1/16S102J	R 643	(B,101,70)	RS1/16S102J
R 568	(B,135,16)	RS1/16S0R0J	R 644	(B,104,64)	RS1/16S473J
R 569	(A,123,31)	RS1/16S272J	R 645	(B,101,64)	RAB4C681J
R 570	(A,119,30)	RS1/16S472J	R 646	(B,98,58)	RS1/16S104J
R 571	(A,134,38)	RS1/16S750J	R 647	(A,100,61)	RS1/16S681J
R 572	(A,134,35)	RS1/16S472J	R 648	(A,100,58)	RS1/16S681J
R 573	(A,135,35)	RS1/16S472J	R 649	(A,101,53)	RS1/16S473J
R 574	(B,137,25)	RS1/16S101J	R 651	(B,92,66)	RS1/16S473J
R 575	(A,137,31)	RS1/16S472J	R 652	(B,77,57)	RS1/16S681J
R 576	(B,132,31)	RS1/16S472J	R 653	(B,75,59)	RS1/16S101J
R 577	(A,130,28)	RS1/16S102J	R 654	(B,76,63)	RS1/16S473J
R 578	(A,134,31)	RS1/16S272J	R 661	(A,96,55) (RI)	RS1/16S473J
R 579	(A,130,31)	RS1/16S472J	R 662	(A,96,52) (RC,RD)	RS1/16S473J
R 580	(B,141,24)	RS1/16S0R0J	R 663	(A,94,55) (RC)	RS1/16S473J
R 581	(A,145,38)	RS1/16S750J	R 664	(A,94,52) (RD,RI)	RS1/16S473J
R 582	(A,144,35)	RS1/16S472J	R 671	(A,84,53)	RS1/16S103J
R 583	(A,145,35)	RS1/16S472J	R 672	(A,88,55)	RS1/16S473J
R 584	(B,148,25)	RS1/16S101J	R 673	(A,92,55)	RS1/16S473J
R 585	(A,146,31)	RS1/16S472J	R 681	(B,98,43)	RS1/16S104J

Circuit Symbol and No.		Part No.
R 691	(A,110,55)	RS1/16S103J
R 692	(A,109,50)	RS1/16S223J
R 693	(A,106,51)	RS1/16S473J
R 694	(B,109,56)	RS1/16S472J
R 695	(B,112,56)	RS1/16S472J
R 702	(B,16,24)	RS1/16S153J
R 703	(B,13,24)	RS1/10S301J
R 704	(B,9,24)	RS1/10S301J
R 705	(A,144,101)	RS1/16S102J
R 706	(A,143,101)	RS1/16S473J
R 707	(A,144,105)	RS1/16S473J
R 708	(B,143,100)	RS1/16S103J
R 709	(A,142,107)	RS1/16S473J
R 710	(B,134,103)	RS1/16S103J
R 711	(B,134,106)	RS1/16S103J
R 712	(B,129,109)	RS1/16S103J
R 713	(B,131,103)	RS1/16S103J
R 714	(A,134,105)	RS1/16S473J
R 715	(A,132,107)	RS1/16S472J
R 716	(B,128,105)	RS1/16S104J
R 717	(B,124,111)	RS1/16S473J
R 718	(A,143,112)	RS1/16S102J
R 719	(A,140,109)	RS1/16S472J
R 720	(A,138,108)	RS1/16S472J
R 721	(B,138,109)	RS1/16S153J
R 751	(B,48,9)	RS1/16S472J
R 752	(B,48,11)	RS1/16S223J
R 755	(B,41,9)	RS1/16S472J
R 756	(B,41,11)	RS1/16S223J
R 771	(B,71,150)	RS1/16S271J
R 772	(B,69,150)	RS1/16S271J
R 773	(B,66,150)	RS1/16S271J
R 774	(B,58,147)	RS1/16S103J
R 775	(B,58,150)	RS1/16S103J
R 776	(B,73,90)	RS1/16S0R0J
R 781	(A,76,39)	RS1/16S0R0J
R 782	(B,69,55)	RS1/16S271J
R 783	(B,69,54)	RS1/16S271J
R 784	(B,69,52)	RS1/16S271J
R 785	(B,72,52)	RS1/16S103J
R 786	(B,73,50)	RS1/16S103J
R 788	(B,66,56)	RS1/16S0R0J
R 801	(B,34,34)	RS1/16S3901D
R 802	(B,37,34)	RS1/16S4701D
R 803	(B,35,31)	RS1/16S2202D
R 804	(B,35,34)	RS1/16S2202D
R 805	(B,47,33)	RS1/16S6801D
R 806	(B,48,38)	RS1/16S8200D
R 807	(B,48,30)	RS1/16S3900D
R 808	(B,48,33)	RS1/16S3301D
R 809	(A,32,49)	RS1/16S560J
R 810	(A,53,48)	RS1/16S560J
R 811	(A,35,44)	RS1/16S272J
R 812	(A,46,47)	RS1/16S272J
R 813	(A,36,44)	RS1/16S221J
R 814	(A,47,43)	RS1/16S221J
R 815	(B,38,38)	RS1/16S6801D
R 816	(A,36,37)	RS1/16S1502D
R 817	(A,46,35)	RS1/16S6801D
R 818	(A,47,38)	RS1/16S6802D

Circuit Symbol and No.		Part No.
R 819	(B,34,39)	RS1/16S3901D
R 820	(B,48,40)	RS1/16S7501D
R 821	(B,38,40)	RS1/16S2203D
R 822	(B,44,40)	RS1/16S4702D
R 823	(B,38,43)	RS1/16S3302D
R 824	(B,43,43)	RS1/16S3302D
R 825	(A,103,130)	RS1/16S0R0J
R 826	(A,100,130)	RS1/16S0R0J
R 829	(B,54,39)	RS1/16S1200D
R 830	(B,51,43)	RS1/16S102J
R 831	(B,14,90)	RS1/16S6802D
R 832	(B,14,93)	RS1/16S1202D
R 833	(B,15,84)	RS1/16S1203D
R 834	(B,14,87)	RS1/16S1502D
R 835	(B,23,84)	RS1/16S102J
R 841	(B,112,18)	RS1/16S471J
R 842	(A,167,68)	RS1/16S2R2J
R 843	(A,167,65)	RS1/16S2R2J
R 844	(A,165,68)	RS1/16S2R2J
R 845	(A,165,65)	RS1/16S2R2J
R 846	(A,152,54)	RS1/16S222J
R 856	(A,61,64)	RS1/16S473J
R 861	(A,75,14)	RS1/16S103J
R 862	(A,74,16)	RS1/16S332J
R 864	(A,69,98)	RS1/16S103J
R 865	(A,67,100)	RS1/16S332J
R 867	(A,99,29)	RS1/16S103J
R 868	(A,97,28)	RS1/16S332J
R 871	(B,158,83)	RS1/16S102J
R 872	(B,156,84)	RS1/16S473J
R 891	(B,164,76)	RS1/16S391J
R 892	(A,159,90)	RS1/16S0R0J
R 893	(B,158,110)	RS1/16S101J
R 894	(B,156,110)	RS1/16S101J
R 895	(B,156,104)	RS1/16S101J

CAPACITORS

C 121	(B,106,98)	CKSRYB102K50
C 122	(B,108,98)	CKSRYB102K50
C 123	(B,121,118)	CKSRYB104K50
C 124	(B,109,98)	CKSRYB104K50
C 153	(B,42,92)	CKSRYB104K50
C 171	(B,5,54)	CCSRCH101J50
C 181	(B,45,83)	CKSRYB104K50
C 182	(A,50,79)	CKSRYB104K50
C 184	(B,28,99)	CKSRYB104K50
C 186	(B,28,79)	CCSRCH101J50
C 187	(B,26,79)	CKSRYB104K50
C 188	(B,32,62)	CKSRYB104K50
C 201	(B,137,55)	CKSRYB105K6R3
C 202	(B,151,53)	CKSRYB105K6R3
C 203	(B,137,56)	CKSRYB105K6R3
C 204	(B,154,54)	CKSRYB105K6R3
C 205	(B,140,53)	CKSRYB224K16
C 206	(B,147,54)	CKSRYB224K16
C 207	(B,137,51)	CKSRYB105K6R3
C 208	(B,150,49)	CKSRYB105K6R3
C 211	(B,143,51)	CKSRYB105K6R3
C 212	(B,145,51)	CKSRYB105K6R3

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
C 213 (A,139,59)	CKSYB475K16	C 406 (A,32,102)	CKSRYB103K50
C 214 (A,152,59)	CKSYB475K16	C 407 (A,33,109)	CEVLW101M10
C 217 (A,138,61)	CKSYB475K16	C 408 (B,84,116)	CKSRYB102K50
C 218 (A,152,61)	CKSYB475K16	C 409 (B,19,140)	CKSRYB102K50
C 219 (A,137,63)	CKSYB475K16	C 410 (B,75,137)	CKSRYB102K50
C 220 (A,152,63)	CKSYB475K16	C 411 (B,3,57)	CCSRCH101J50
C 221 (A,137,65)	CKSYB475K16	C 413 (A,68,104)	CKSRYB104K50
C 222 (A,152,65)	CKSYB475K16	C 417 (B,16,32)	CKSRYB104K50
C 223 (B,137,66)	CCSRCH100D50	C 418 (B,28,7)	CKSRYB102K50
C 224 (B,153,66)	CCSRCH100D50	C 419 (B,54,109)	CKSRYB104K50
C 225 (B,139,70)	CCSRCH100D50	C 421 (B,77,110)	CKSRYB474K10
C 226 (B,153,71)	CCSRCH100D50	C 422 (B,79,110)	CKSRYB474K10
C 227 (B,139,72)	CCSRCH100D50	C 423 (B,120,54)	CCSRCH470J50
C 228 (B,150,70)	CCSRCH100D50	C 424 (B,120,59)	CCSRCH470J50
C 229 (A,152,69)	CEVLW100M16	C 425 (B,126,58)	CKSYB475K16
C 230 (B,143,71)	CKSRYB104K50	C 426 (B,124,58)	CKSRYB103K50
C 231 (B,143,72)	CKSRYB104K50	C 427 (B,119,51)	CCSRCH470J50
C 232 (A,136,71)	CKSRYB102K50	C 428 (B,133,51)	CCSRCH470J50
C 233 (A,145,63)	CEVLW470M16	C 429 (B,120,48)	CKSRYB474K10
C 234 (A,138,68)	CKSRYB104K50	C 430 (B,133,47)	CKSRYB474K10
C 241 (B,143,113)	CKSRYB105K10	C 431 (B,126,48)	CKSRYB105K10
C 242 (B,146,113)	CKSRYB105K10	C 441 (B,151,42)	CKSRYB105K6R3
C 243 (B,143,115)	CKSRYB105K10	C 442 (B,143,43)	CKSRYB105K6R3
C 244 (B,146,115)	CKSRYB105K10	C 443 (B,149,43)	CKSRYB105K6R3
C 245 (B,145,113)	CKSRYB105K10	C 444 (B,146,43)	CKSRYB105K6R3
C 246 (B,152,115)	CKSRYB105K10	C 445 (A,139,25)	CKSRYB105K6R3
C 247 (B,145,115)	CKSRYB105K10	C 446 (A,138,23)	CKSRYB105K6R3
C 248 (B,155,115)	CKSRYB105K10	C 447 (A,145,41)	CKSYB475K16
C 249 (A,153,85)	CEVLW330M25	C 448 (A,155,46)	CEVLW100M16
C 250 (B,124,114) 10µF	CCG1138	C 449 (A,149,41)	CKSRYB104K50
C 251 (A,119,127) 1000µF/16V	CCH1428	C 451 (B,136,43)	CKSRYB105K6R3
C 252 (B,145,105) 10µF	CCG1182	C 452 (B,127,43)	CKSRYB105K6R3
C 253 (A,160,117)	CKSYB475K16	C 453 (B,133,43)	CKSRYB105K6R3
C 254 (A,157,117)	CKSYB475K16	C 454 (B,130,43)	CKSRYB105K6R3
C 255 (B,157,115)	CKSRYB473K50	C 455 (B,123,44)	CKSRYB105K6R3
C 256 (A,156,77)	CEVLW470M16	C 456 (B,123,42)	CKSRYB105K6R3
C 257 (A,142,71)	CEVW101M16	C 457 (A,129,41)	CKSYB475K16
C 258 (A,143,86) 10µF	CCG1182	C 458 (A,139,46)	CEVLW100M16
C 261 (B,107,109) 10µF	CCG1182	C 459 (A,134,41)	CKSRYB104K50
C 262 (B,104,109) 10µF	CCG1182	C 461 (B,55,95)	CKSYB106K6R3
C 263 (B,117,106) 10µF	CCG1182	C 462 (B,57,95)	CKSYB106K6R3
C 264 (B,113,106) 10µF	CCG1182	C 463 (B,53,95)	CKSYB106K6R3
C 265 (B,106,115)	CCSRCH101J50	C 464 (B,51,95)	CKSYB106K6R3
C 266 (B,103,115)	CCSRCH101J50	C 465 (B,64,95)	CKSYB106K6R3
C 267 (B,115,115)	CCSRCH101J50	C 466 (B,66,95)	CKSYB106K6R3
C 268 (B,111,115)	CCSRCH101J50	C 467 (B,60,95)	CKSYB106K6R3
C 269 (A,110,141)	CKSRYB102K50	C 468 (B,62,95)	CKSYB106K6R3
C 301 (B,121,89)	CKSRYB105K6R3	C 469 (B,52,84)	CCSRCH6R0D50
C 302 (B,121,92)	CKSRYB105K6R3	C 470 (B,52,88)	CCSRCH6R0D50
C 305 (A,150,76)	CEVLW100M16	C 471 (B,65,84)	CCSRCH6R0D50
C 306 (B,133,81)	CKSRYB104K50	C 472 (B,65,88)	CCSRCH6R0D50
C 307 (B,121,86) 10µF	CCG1171	C 473 (A,54,81)	CKSRYB104K50
C 308 (A,131,94)	CKSRYB104K50	C 474 (A,54,84)	CKSRYB102K50
C 309 (B,133,89)	CKSRYB104K50	C 475 (A,58,85)	CKSRYB104K50
C 310 (B,139,91)	CKSRYB104K50	C 481 (B,65,64)	CKSRYB102K50
C 313 (A,136,94)	CKSRYB104K50	C 482 (B,61,64)	CKSRYB102K50
C 402 (B,59,128)	CKSYB475K16	C 483 (B,154,59)	CKSRYB102K50
C 403 (B,59,130)	CKSRYB103K50	C 484 (B,70,131)	CCSRCH101J50
C 404 (A,68,110)	CEVLW470M6R3	C 487 (B,48,128)	CKSRYB103K50
C 405 (B,57,111)	CKSRYB103K50	C 488 (B,42,65)	CKSRYB104K50

Circuit Symbol and No.		Part No.
C 501	(A,151,5) 10μF	CCG1171
C 502	(A,150,10)	CEVLW100M16
C 503	(A,155,8)	CKSRYB104K50
C 511	(A,135,10)	CKSRYB105K6R3
C 512	(A,142,8)	CEVLW101M10
C 521	(A,156,6) 47μF/6.3V	CCG1181
C 522	(A,157,10) 47μF/6.3V	CCG1181
C 523	(A,153,25)	CEVLW101M10
C 524	(A,162,22) 10μF	CCG1171
C 525	(B,162,17)	CKSRYB104K50
C 526	(B,165,17)	CKSRYB104K50
C 527	(B,164,13)	CCSRCH4R0D50
C 529	(A,153,33)	CEVLW101M10
C 530	(A,165,26) 10μF	CCG1171
C 531	(A,138,17)	CEVLW221M4
C 532	(A,145,17)	CEVLW221M4
C 533	(A,153,17)	CEVLW221M4
C 535	(B,155,5) 22μF/6.3V	CCG1178
C 536	(B,156,15) 22μF/6.3V	CCG1178
C 541	(A,36,76)	CKSYB106K6R3
C 543	(B,40,70)	CKSYB475K16
C 544	(B,33,70)	CKSRYB103K50
C 545	(A,33,70)	CEVLW220M6R3
C 546	(A,40,70)	CEVLW101M10
C 547	(B,136,5)	CKSRYB105K6R3
C 551	(A,124,22)	CKSYB106K6R3
C 552	(A,130,22)	CKSYB106K6R3
C 554	(A,131,17)	CCSRCH6R0D50
C 555	(A,122,15)	CKSRYB104K50
C 556	(A,123,17) 10μF	CCG1171
C 557	(B,124,14)	CKSRYB104K50
C 558	(B,130,9)	CKSRYB104K50
C 561	(A,122,36)	CKSYB106K6R3
C 562	(A,127,36)	CKSYB106K6R3
C 564	(A,125,31)	CCSRCH6R0D50
C 565	(A,119,29)	CKSRYB104K50
C 566	(B,135,19)	CKSRYB104K50
C 567	(A,119,32) 10μF	CCG1171
C 568	(B,123,26)	CKSRYB104K50
C 571	(A,132,36)	CKSYB106K6R3
C 572	(A,137,36)	CKSYB106K6R3
C 574	(A,135,31)	CCSRCH6R0D50
C 575	(A,130,29)	CKSRYB104K50
C 576	(A,130,33) 10μF	CCG1171
C 577	(B,134,25)	CKSRYB104K50
C 578	(B,138,24)	CKSRYB104K50
C 581	(A,142,36)	CKSYB106K6R3
C 582	(A,147,36)	CKSYB106K6R3
C 584	(A,148,31)	CCSRCH6R0D50
C 585	(A,141,29)	CKSRYB104K50
C 586	(A,141,33) 10μF	CCG1171
C 587	(B,145,26)	CKSRYB104K50
C 588	(B,151,24)	CKSRYB104K50
C 601	(B,76,95)	CKSRYB105K6R3
C 604	(B,106,94)	CCSRCH7R0D50
C 605	(B,106,89)	CCSRCH7R0D50
C 606	(B,91,64)	CKSRYB105K6R3
C 608	(B,75,61)	CCSRCH101J50
C 609	(B,74,67)	CKSRYB104K50
C 611	(B,95,56)	CKSRYB103K50
C 612	(B,77,100)	CKSRYB103K50
C 671	(B,88,50)	CKSRYB105K6R3
C 681	(A,98,42)	CEVLW2R2M50
C 691	(A,105,51)	CKSRYB103K50
C 692	(B,112,58)	CKSRYB103K50
C 701	(B,8,34)	CKSRYB104K50
C 704	(A,6,42) 2200μF/16V	CCH1405
C 705	(B,132,149)	CKSRYB104K50
C 706	(B,143,103)	CKSRYB103K50
C 707	(B,139,103)	CKSRYB104K50
C 708	(B,133,103)	CKSRYB104K50
C 709	(A,132,109)	CKSRYB104K50
C 710	(B,109,129)	CKSRYB103K50
C 711	(B,140,108)	CKSRYB104K50
C 712	(B,124,118)	CKSRYB104K50
C 751	(A,54,13)	CKSRYB104K50
C 753	(A,49,14)	CKSRYB104K50
C 771	(B,63,150)	CKSRYB103K50
C 772	(A,86,149)	CEVLW100M16
C 773	(B,70,139)	CKSRYB103K50
C 781	(B,70,35)	CKSRYB103K50
C 782	(A,74,29)	CEVLW100M16
C 783	(B,73,40)	CKSRYB103K50
C 801	(B,34,31)	CKSRYB153K50
C 802	(B,47,30)	CKSRYB223K50
C 803	(A,35,20) 220μF/10V	CCH1409
C 804	(A,46,20) 470μF/6.3V	CCH1437
C 805	(A,52,51)	CKSYB225K16
C 806	(A,34,50)	CKSYB225K16
C 807	(B,38,36)	CKSYB475K16
C 808	(B,42,34)	CCSRCH101J50
C 809	(B,34,41)	CKSRYB223K50
C 810	(B,48,41)	CKSRYB683K50
C 811	(B,38,44)	CKSRYB104K50
C 812	(B,43,44)	CKSRYB104K50
C 813	(A,41,46)	CKSRYB104K50
C 814	(A,42,48)	CKSYB475K16
C 815	(A,65,48) 100μF/16V	CCH1565
C 816	(A,60,54)	CKSYB225K16
C 817	(A,89,125) 2200μF/16V	CCH1405
C 818	(A,70,40) 100μF/16V	CCH1565
C 819	(A,63,40) 100μF/16V	CCH1565
C 820	(B,51,42)	CKSRYB474K10
C 821	(A,35,25) 220μF/10V	CCH1409
C 831	(B,18,84)	CCSRCH102J50
C 832	(A,44,90)	CEVLW470M16
C 833	(B,19,82)	CKSRYB474K10
C 841	(B,101,34)	CKSYB475K16
C 842	(B,101,32)	CKSRYB102K50
C 843	(A,105,19)	CEVLW101M10
C 845	(B,110,21)	CKSRYB103K50
C 846	(B,113,21)	CKSRYB103K50
C 847	(A,108,29)	CEVW101M16
C 848	(A,165,61) 2200μF/16V	CCH1405
C 849	(A,157,50)	CKSRYB104K50
C 851	(A,84,24) 0.22μF	CCL1058
C 852	(A,65,21)	CKSQYB225K10
C 853	(A,70,24)	CKSRYB105K10
C 854	(A,75,20)	CKSRYB102K50
C 856	(A,61,63)	CKSRYB105K6R3

Circuit Symbol and No.		Part No.
C 857	(A,57,67)	CKSRYB105K10
C 858	(A,59,69)	CKSRYB103K50
C 864	(A,70,98)	CKSRYB104K50
C 871	(A,154,101)	CEVLW101M10
C 872	(A,158,110)	CKSRYB103K50
C 873	(A,152,116)	CEVW101M16
C 881	(A,5,140)	CEVLW220M6R3
C 882	(B,32,139)	CKSRYB103K50
C 883	(B,33,145)	CKSYB475K16
C 884	(B,34,142)	CKSRYB104K50
C 891	(B,161,75)	CKSRYB104K50
C 892	(A,163,76)	CEVLW470M6R3
C 893	(B,164,74)	CKSRYB103K50
C 894	(A,166,71) 10µF	CCG1182
C 895	(B,152,101)	CKSRYB104K50

G

Unit Number:CWM9817
Unit Name:RGB Unit

MISCELLANEOUS

IC 981	(A,59,33) IC	TC7SET08FUS1
D 951	(A,38,28) Diode	HZU2R7(B1)
D 952	(A,36,28) Diode	HZU2R7(B1)
D 953	(A,18,18) Diode	HZU2R7(B1)
D 954	(A,22,18) Diode	HZU2R7(B1)
D 955	(A,13,23) Diode	HZU2R7(B1)
D 956	(A,17,23) Diode	HZU2R7(B1)
D 957	(A,15,21) Diode	HZU2R7(B1)
D 958	(A,18,19) Diode	HZU2R7(B1)
D 959	(A,13,24) Diode	HZU2R7(B1)
D 960	(A,17,24) Diode	HZU2R7(B1)
D 961	(A,56,27) Diode	UDZS5R6(B)
D 962	(A,16,26) Diode	UDZS5R6(B)
D 963	(A,12,26) Diode	UDZS5R6(B)
D 964	(A,16,28) Diode	UDZS5R6(B)
D 965	(A,12,28) Diode	UDZS5R6(B)
D 981	(A,65,40) Diode	UDZS5R6(B)
D 982	(A,59,35) Diode	UDZS5R6(B)
L 981	(A,56,31) Inductor	CTF1389
L 982	(A,57,15) Inductor	CTF1379

RESISTORS

R 982	(A,57,27)	RS1/16S0R0J
R 983	(A,57,33)	RS1/16S121J
R 984	(A,68,39)	RS1/16S473J
R 985	(A,70,40)	RS1/16S621J
R 986	(A,72,39)	RS1/16S221J
R 987	(A,67,9)	RS1/16S0R0J

CAPACITORS

C 951	(A,61,9)	CKSRYB102K50
C 952	(A,62,27)	CCSRCH471J50
C 953	(A,8,24)	CKSRYB104K50
C 981	(A,62,34)	CKSYB106K6R3
C 982	(A,59,29)	CKSRYB104K50
C 983	(A,70,38)	CCSRCH150J50
C 984	(A,56,35)	CKSRYB104K50

Circuit Symbol and No. **Part No.**

Monitor Unit
Consists of
Monitor PCB
Inverter PCB
Upper PCB

BFH

Unit Number:CWM9822
Unit Name:Monitor Unit

MISCELLANEOUS

Circuit Symbol and No.		Part No.
IC 4001	(A,119,33) IC	TC90A96AFG
IC 4101	(A,100,67) IC	NJM2100V
IC 4102	(A,142,49) IC	TC7SET04FUS1
IC 4103	(A,144,41) IC	TC7S66FU
IC 4104	(A,147,32) IC	NJM082BV
IC 4105	(A,95,66) IC	M62343FP
IC 4121	(A,96,57) IC	TC74VHC04FTS1
IC 4122	(A,91,60) IC	TC7SET04FUS1
IC 4171	(A,150,13) IC	TC7S04FU
IC 4181	(A,21,43) IC	BD6171KV
IC 4182	(A,74,16) IC	S-1131B25UC-N4K
IC 4183	(A,80,27) IC	S-1131B15UC-N4A
IC 4311	(B,7,106) IC	NJM062V
IC 4451	(A,144,21) IC	TC7WH08FU
IC 4452	(A,141,27) IC	TC7SH02FUS1
IC 4453	(A,144,28)	TC7SH32FUS1
IC 4531	(A,57,43) IC	TC7SET08FUS1
IC 4601	(A,68,60) IC	PEG087A
IC 4602	(A,49,66) IC	S-80827CNNB-B8M
IC 4604	(A,62,44) IC	TC7SET08FUS1
IC 4605	(A,64,43) IC	TC7SH08FUS1
IC 4606	(A,49,70) IC	S-818A33AUC-BGN
IC 4691	(A,40,16) IC	S-93C56BD0I-J8
IC 5341	(B,9,45) IC	OZ961ISN
IC 5345	(B,10,28) IC	TC7SET08FUS1
IC 5373	(B,11,8) IC	TA78L05F
Q 4001	(A,114,14) Transistor	2SC4617
Q 4101	(A,149,41) Transistor	UMX2N
Q 4102	(A,148,48) Transistor	UMT2N
Q 4181	(A,31,38) FET	RSQ035P03
Q 4182	(A,33,49) FET	RSQ035P03
Q 4301	(A,30,9) Transistor	2SC4617
Q 4440	(A,84,10) Transistor	2SC4081
Q 4441	(A,91,10) Transistor	2SA1576
Q 4501	(A,19,76) Transistor	UMF5N
Q 4502	(A,23,76) Transistor	UMF5N
Q 4503	(A,28,75) Transistor	FMG12
Q 4602	(A,43,68) Transistor	2SC4617
Q 4603	(A,55,71) Transistor	DTC114EE
Q 4661	(A,66,11) Transistor	2SC4617
Q 4662	(A,66,15) Transistor	2SC4617
Q 4663	(A,62,12) Transistor	2SC4617
Q 5002	(B,12,65) Transistor	2SC4617
Q 5003	(B,11,67) Transistor	2SC4617
Q 5005	(B,10,72) Transistor	UMX2N
Q 5342	(B,5,34) Transistor	2SA1774
Q 5343	(A,9,52) FET	SI6544DQ

Circuit Symbol and No.			Part No.
Q 5344	(A,7,55)	FET	SI6544DQ
Q 5371	(A,11,30)	Transistor	2SC4617
Q 5372	(A,10,34)	Transistor	2SC4617
D 4181	(A,33,35)	Diode	RB160M-30
D 4182	(A,38,49)	Diode	U2FWJ44N
D 4183	(A,30,33)	Diode	RB548W
D 4184	(A,28,33)	Diode	RB548W
D 4185	(A,16,29)	Diode	RB548W
D 4186	(A,12,33)	Diode	RB548W
D 4187	(A,12,37)	Diode	RB548W
D 4241	(A,75,28)	Diode	RB500V-40
D 4242	(A,70,11)	Diode	RB500V-40
D 4311	(B,8,125)	Photo Diode	AM-30-21
D 4312	(B,4,131)	Diode	UDZS5R6(B)
D 4313	(B,12,133)	Diode	UDZS5R6(B)
D 4351	(B,6,9)	LED	CL-195PG-CD
D 4352	(B,6,21)	LED	CL-195PG-CD
D 4353	(B,6,141)	LED	CL-195PG-CD
D 4354	(B,6,152)	LED	CL-195PG-CD
D 4371	(B,9,65)	LED	CL-190UB2-X
D 4372	(B,9,81)	LED	CL-190UB2-X
D 4373	(B,9,96)	LED	CL-190UB2-X
D 4501	(A,37,81)	Diode	UDZS5R6(B)
D 4502	(A,35,84)	Diode	UDZS5R6(B)
D 4503	(A,36,77)	Diode	UDZS5R6(B)
D 4504	(A,39,76)	Diode	UDZS5R6(B)
D 4505	(A,27,78)	Diode	MA111
D 4591	(A,21,16)	Diode	UDZS5R6(B)
D 4592	(A,21,14)	Diode	UDZS5R6(B)
D 4593	(A,21,13)	Diode	UDZS5R6(B)
D 4594	(A,11,16)	Diode	UDZS5R6(B)
D 5001	(B,7,63)	Diode	UDZS8R2(B)
D 5201	(A,9,39)	LED	CL-195PG-CD
D 5202	(A,9,26)	LED	CL-195PG-CD
D 5203	(A,9,12)	LED	CL-195PG-CD
D 5340	(B,5,70)	Diode	HZU6R2(B3)
D 5341	(A,11,49)	Diode	HZU6R2(B3)
D 5342	(A,6,49)	Diode	HZU6R2(B3)
D 5343	(B,6,96)	Diode	MA143
D 5344	(B,5,75)	Diode	MA143
D 5351	(B,8,25)	Diode	1SS355
D 5371	(B,6,31)	Diode	UDZS6R2(B)
D 5372	(B,12,33)	Diode	RB751V40
L 4001	(A,103,41)	Inductor	CTF1306
L 4002	(A,100,35)	Inductor	CTF1306
L 4003	(A,103,36)	Inductor	CTF1306
L 4004	(A,101,32)	Inductor	CTF1306
L 4005	(A,103,29)	Inductor	CTF1306
L 4006	(A,101,28)	Inductor	CTF1306
L 4007	(A,102,25)	Inductor	CTF1306
L 4008	(A,102,23)	Inductor	CTF1306
L 4009	(A,104,19)	Inductor	CTF1306
L 4010	(A,104,18)	Inductor	CTF1306
L 4011	(A,102,15)	Inductor	CTF1306
L 4012	(A,102,14)	Inductor	CTF1306
L 4013	(A,111,11)	Inductor	CTF1306
L 4018	(A,114,12)	Inductor	CTF1306
L 4025	(A,119,16)	Inductor	CTF1306
L 4030	(A,121,16)	Inductor	CTF1306
L 4034	(A,125,16)	Inductor	CTF1306

Circuit Symbol and No.			Part No.
L 4036	(A,129,16)	Inductor	CTF1306
L 4038	(A,131,19)	Inductor	CTF1306
L 4039	(A,135,20)	Inductor	CTF1306
L 4040	(A,135,21)	Inductor	CTF1306
L 4041	(A,138,20)	Inductor	CTF1306
L 4042	(A,139,21)	Inductor	CTF1306
L 4043	(A,138,23)	Inductor	CTF1306
L 4044	(A,135,24)	Inductor	CTF1306
L 4048	(A,135,26)	Inductor	CTF1306
L 4049	(A,136,27)	Inductor	CTF1306
L 4050	(A,135,28)	Inductor	CTF1306
L 4051	(A,136,30)	Inductor	CTF1306
L 4052	(A,136,31)	Inductor	CTF1306
L 4053	(A,135,34)	Inductor	CTF1306
L 4054	(A,135,36)	Inductor	CTF1306
L 4055	(A,135,37)	Inductor	CTF1306
L 4056	(A,135,38)	Inductor	CTF1306
L 4057	(A,136,40)	Inductor	CTF1306
L 4058	(A,138,41)	Inductor	CTF1306
L 4059	(A,136,43)	Inductor	CTF1306
L 4060	(A,135,44)	Inductor	CTF1306
L 4061	(A,132,47)	Ferrite Bead	CTF1528
L 4062	(A,132,48)	Ferrite Bead	CTF1528
L 4063	(A,130,48)	Ferrite Bead	CTF1528
L 4064	(A,130,48)	Ferrite Bead	CTF1528
L 4065	(A,129,48)	Ferrite Bead	CTF1528
L 4066	(A,128,48)	Ferrite Bead	CTF1528
L 4067	(A,127,48)	Ferrite Bead	CTF1528
L 4068	(A,126,50)	Inductor	CTF1306
L 4069	(A,124,50)	Inductor	CTF1306
L 4070	(A,123,49)	Ferrite Bead	CTF1528
L 4071	(A,123,51)	Ferrite Bead	CTF1528
L 4072	(A,122,49)	Ferrite Bead	CTF1528
L 4073	(A,121,51)	Ferrite Bead	CTF1528
L 4074	(A,121,49)	Ferrite Bead	CTF1528
L 4075	(A,120,51)	Ferrite Bead	CTF1528
L 4076	(A,119,49)	Inductor	CTF1306
L 4077	(A,118,49)	Ferrite Bead	CTF1528
L 4078	(A,118,51)	Ferrite Bead	CTF1528
L 4079	(A,117,49)	Ferrite Bead	CTF1528
L 4080	(A,116,51)	Ferrite Bead	CTF1528
L 4081	(A,116,49)	Ferrite Bead	CTF1528
L 4082	(A,115,51)	Ferrite Bead	CTF1528
L 4083	(A,114,50)	Inductor	CTF1306
L 4084	(A,112,52)	Inductor	CTF1306
L 4085	(A,112,49)	Inductor	CTF1306
L 4086	(A,111,50)	Ferrite Bead	CTF1528
L 4087	(A,110,50)	Ferrite Bead	CTF1528
L 4088	(A,109,50)	Ferrite Bead	CTF1528
L 4089	(A,108,50)	Ferrite Bead	CTF1528
L 4090	(A,107,50)	Ferrite Bead	CTF1528
L 4091	(A,106,50)	Ferrite Bead	CTF1528
L 4092	(A,106,48)	Inductor	CTF1306
L 4093	(A,105,46)	Inductor	CTF1306
L 4094	(A,99,14)	Inductor	CTF1635
L 4095	(A,136,15)	Inductor	CTF1635
L 4096	(A,95,17)	Inductor	CTF1635
L 4097	(A,139,44)	Inductor	CTF1635
L 4098	(A,101,38)	Inductor	CTF1635
L 4099	(A,99,18)	Inductor	CTF1635

Circuit Symbol and No.	Part No.
L 4100 (A,46,53) Choke Coil 18µH	CTH1250
L 4101 (A,141,33) Inductor	LCKAW101J2520
L 4102 (A,150,27) Inductor	LCKAW101J2520
L 4105 (A,146,45) Inductor	CTF1306
L 4121 (A,96,49) Inductor	CTF1635
L 4122 (A,97,61) Inductor	CTF1306
L 4123 (A,92,55) Inductor	CTF1306
L 4151 (A,133,53) Chip Inductor	DTL1096
L 4152 (A,128,53) Inductor	CTF1635
L 4153 (A,136,54) Inductor	CTF1635
L 4161 (A,144,55) Chip Inductor	DTL1096
L 4171 (A,142,15) Inductor	LCKAW101J2520
L 4172 (A,150,16) Inductor	CTF1306
L 4173 (A,146,12) Inductor	CTF1379
L 4181 (A,23,25) Chip Inductor	DTL1096
L 4185 (A,42,60) Choke Coil 10µH	CTH1249
L 4186 (A,10,47) Inductor	CTF1635
L 4195 (A,26,26) Inductor	CTF1635
L 4203 (A,36,30) Choke Coil 68µH	CTH1318
L 4207 (A,12,27) Inductor	CTF1635
L 4214 (A,36,55) Choke Coil 18µH	CTH1250
L 4311 (B,11,114) Inductor	LCKBW100K2520
L 4423 (A,79,15) Inductor	LCKAW101J2520
L 4424 (A,88,15) Inductor	LCTAW220J2520
L 4425 (A,91,15) Chip Coil	LCTAW270J2520
L 4451 (A,145,15) Inductor	LCKAW101J2520
L 4521 (A,88,81) Coil	CTH1338
L 4531 (A,54,43) Inductor	CTF1306
L 4541 (A,24,70) Inductor	CTF1488
L 4601 (A,51,79) Inductor	LCKBW100K2520
L 4602 (A,43,72) Inductor	LCKBW100K2520
T 5341 (A,8,79) Transformer	CTT1126
TH4301 (A,32,11) Thermistor	CCX1051
X 4001 (A,107,13)Crystal Resonator 42MHz	CSS1604
X 4601 (A,66,49) Radiator 10.0MHz	CSS1577
S 4391 (B,8,5) Push Switch	CSG1126
S 4392 (B,8,25) Push Switch	CSG1126
S 4393 (B,8,137) Push Switch	CSG1126
S 4394 (B,8,156) Push Switch	CSG1126
S 5101 (A,11,39) Push Switch	CSG1155
S 5102 (A,11,26) Push Switch	CSG1155
S 5103 (A,11,12) Push Switch	CSG1155
VR5341 (A,10,43) Semi-fixed 15kΩ(B)	CCP1424
⚠ FU4541 (A,29,70) Fuse 500mA	CEK1251
⚠ FU5341 (B,4,27) Fuse 1.25A	CEK1281
EF4401 (A,88,39) EMI Filter	CCG1082
EF4402 (A,88,35) EMI Filter	CCG1082
EF4403 (A,89,32) EMI Filter	CCG1082

RESISTORS

Circuit Symbol and No.	Part No.
R 4001 (A,111,17)	RS1/16SS105J
R 4002 (A,110,14)	RS1/16SS391J
R 4003 (A,114,16)	RS1/16SS152J
R 4004 (A,116,16)	RS1/16SS331J
R 4005 (A,120,10)	RS1/16S0R0J
R 4061 (A,138,34)	RS1/16SS333J
R 4062 (A,134,48)	RAB4CQ221J
R 4063 (A,128,50)	RAB4CQ221J
R 4064 (A,122,53)	RAB4CQ221J
R 4065 (A,119,53)	RAB4CQ221J
R 4066 (A,134,33)	RS1/16S102J
R 4067 (A,116,53)	RAB4CQ221J
R 4068 (A,110,52)	RAB4CQ221J
R 4069 (A,107,52)	RAB4CQ221J
R 4070 (A,135,18)	RS1/16S0R0J
R 4101 (A,104,63)	RS1/16S101J
R 4102 (A,104,67)	RS1/16S101J
R 4103 (A,151,36)	RS1/16SS472J
R 4104 (A,151,31)	RS1/16SS223J
R 4106 (A,145,34)	RS1/16S3302F
R 4107 (A,144,32)	RS1/16S5602F
R 4108 (A,148,39)	RS1/16S101J
R 4111 (A,150,43)	RS1/16S153J
R 4112 (A,151,45)	RS1/16SS153J
R 4113 (A,148,44)	RS1/16SS0R0J
R 4114 (A,150,45)	RS1/16SS0R0J
R 4115 (A,150,39)	RS1/16SS100J
R 4116 (A,151,47)	RS1/16SS100J
R 4117 (A,143,46)	RS1/16SS681J
R 4118 (A,90,65)	RAB4CQ221J
R 4122 (A,101,61)	RS1/16S27R0D
R 4124 (A,101,59)	RS1/16S10R0D
R 4125 (A,105,61)	RS1/16S6800D
R 4126 (A,103,60)	RS1/16S1000D
R 4128 (A,104,58)	RS1/16S82R0F
R 4132 (A,104,57)	RS1/16S56R0D
R 4134 (A,102,54)	RS1/16S47R0D
R 4136 (A,102,53)	RS1/16S36R0D
R 4138 (A,102,51)	RS1/16S33R0F
R 4142 (A,100,53)	RS1/16S27R0D
R 4144 (A,101,55)	RS1/16S1800D
R 4146 (A,101,57)	RS1/16S82R0F
R 4148 (A,101,58)	RS1/16S12R0F
R 4151 (A,132,56)	RS1/16S102J
R 4171 (A,148,15)	RS1/16SS102J
R 4173 (A,140,15)	RS1/16SS102J
R 4174 (A,140,17)	RS1/16SS101J
R 4175 (A,140,19)	RS1/16SS101J
R 4181 (A,26,31)	RS1/16S3303D
R 4182 (A,25,35)	RS1/16S1802D
R 4183 (A,24,35)	RS1/16S4300D
R 4184 (A,22,35)	RS1/16S5102D
R 4185 (A,14,43)	RS1/16S2202F
R 4186 (A,13,45)	RS1/16S1802F
R 4187 (A,15,45)	RS1/16S1002F
R 4188 (A,30,42)	RS1/16S563J
R 4191 (A,29,44)	RS1/16S150J
R 4192 (A,27,49)	RS1/16S150J
R 4193 (A,30,50)	RS1/16S273J
R 4194 (A,27,53)	RS1/16S1600D
R 4195 (A,28,55)	RS1/16S1001D
R 4196 (A,28,52)	RS1/16S2700D
R 4201 (A,24,59)	RS1/16S682J
R 4203 (A,15,53)	RS1/16S5100F
R 4204 (A,21,51)	RS1/16S2001F
R 4216 (A,25,50)	RS1/16S333J
R 4217 (A,26,56)	RS1/16S102J
R 4218 (A,24,56)	RS1/16S684J
R 4219 (A,23,62)	RS1/16S6801F

Circuit Symbol and No.		Part No.
R 4220	(A,20,61)	RS1/16S1001D
R 4221	(A,23,61)	RS1/16S201J
R 4222	(A,23,54)	RS1/16S123J
R 4241	(A,76,28)	RS1/16SS684J
R 4242	(A,74,22)	RS1/16SS474J
R 4251	(A,137,28)	RS1/16SS470J
R 4252	(A,139,31)	RS1/16SS470J
R 4253	(A,139,32)	RS1/16SS471J
R 4305	(A,33,14)	RS1/16SS153J
R 4308	(A,28,8)	RS1/16SS104J
R 4309	(A,31,6)	RS1/16S103J
R 4311	(B,7,112)	RS1/16S155J
R 4312	(B,7,117)	RS1/16S105J
R 4313	(B,7,100)	RS1/16S393J
R 4314	(B,7,101)	RS1/16S103J
R 4315	(B,9,99)	RS1/16S203J
R 4316	(B,7,98)	RS1/16S393J
R 4351	(B,11,19)	RS1/16S271J
R 4352	(B,11,16)	RS1/16S271J
R 4353	(B,11,10)	RS1/16S331J
R 4354	(B,4,7)	RS1/16S331J
R 4355	(B,8,45)	RS1/16S271J
R 4356	(B,8,48)	RS1/16S271J
R 4357	(B,7,87)	RS1/16S331J
R 4358	(B,7,90)	RS1/16S331J
R 4371	(B,7,58)	RS1/16S101J
R 4372	(B,8,60)	RS1/16S101J
R 4373	(B,8,61)	RS1/16S101J
R 4374	(B,8,63)	RS1/16S221J
R 4375	(B,9,69)	RS1/16S221J
R 4376	(B,9,72)	RS1/16S221J
R 4377	(B,9,74)	RS1/16S221J
R 4378	(B,9,77)	RS1/16S221J
R 4426	(A,77,76)	RS1/16SS0R0J
R 4439	(A,88,8)	RS1/16S391J
R 4440	(A,92,29)	RS1/16SS0R0J
R 4442	(A,87,12)	RS1/16SS104J
R 4444	(A,92,18)	RS1/16SS272J
R 4445	(A,88,9)	RS1/16S471J
R 4446	(A,87,11)	RS1/16SS681J
R 4448	(A,85,19)	RS1/16S472J
R 4449	(A,86,19)	RS1/16SS104J
R 4450	(A,84,13)	RS1/16SS153J
R 4451	(A,150,20)	RAB4CQ101J
R 4452	(A,151,23)	RS1/16SS473J
R 4454	(A,145,18)	RS1/16SS473J
R 4455	(A,147,22)	RS1/16SS473J
R 4456	(A,149,22)	RS1/16SS101J
R 4501	(A,20,79)	RS1/16SS105J
R 4502	(A,23,79)	RS1/16SS105J
R 4503	(A,18,74)	RS1/16SS103J
R 4504	(A,20,74)	RS1/16SS103J
R 4505	(A,22,74)	RS1/16SS103J
R 4506	(A,24,74)	RS1/16SS103J
R 4507	(A,33,76)	RS1/16SS102J
R 4508	(A,31,77)	RS1/16SS102J
R 4521	(A,97,72)	RS1/16SS101J
R 4522	(A,96,74)	RS1/16SS101J
R 4523	(A,102,74)	RS1/16SS101J
R 4524	(A,101,74)	RS1/16SS101J

Circuit Symbol and No.		Part No.
R 4525	(A,99,75)	RS1/16SS101J
R 4526	(A,98,75)	RS1/16SS101J
R 4531	(A,59,41)	RS1/16SS101J
R 4532	(A,55,44)	RS1/16SS103J
R 4541	(A,74,77)	RS1/16SS471J
R 4563	(A,65,74)	RS1/16S0R0J
R 4564	(A,61,75)	RS1/16S0R0J
R 4565	(A,67,45)	RS1/16S0R0J
R 4566	(A,69,46)	RS1/16S0R0J
R 4591	(A,12,16)	RS1/16SS101J
R 4592	(A,24,11)	RS1/16SS101J
R 4593	(A,24,13)	RS1/16SS101J
R 4594	(A,21,18)	RS1/16SS101J
R 4601	(A,50,73)	RS1/16SS103J
R 4602	(A,55,54)	RS1/16SS473J
R 4603	(A,55,46)	RS1/16SS103J
R 4604	(A,39,67)	RS1/16SS473J
R 4605	(A,41,68)	RS1/16SS473J
R 4606	(A,45,69)	RS1/16SS473J
R 4607	(A,63,48)	RS1/16SS101J
R 4608	(A,47,66)	RS1/16SS103J
R 4609	(A,71,49)	RS1/16SS101J
R 4611	(A,76,42)	RS1/16SS272J
R 4612	(A,75,41)	RS1/16SS272J
R 4613	(A,66,45)	RS1/16SS471J
R 4614	(A,64,47)	RS1/16SS471J
R 4616	(A,82,50)	RAB4CQ102J
R 4617	(A,82,61)	RS1/16SS473J
R 4619	(A,72,70)	RS1/16SS0R0J
R 4620	(A,70,71)	RS1/16SS0R0J
R 4621	(A,57,70)	RS1/16SS473J
R 4622	(A,56,69)	RS1/16SS473J
R 4625	(A,31,24)	RS1/16SS473J
R 4626	(A,53,62)	RAB4CQ473J
R 4627	(A,53,59)	RS1/16SS471J
R 4628	(A,54,66)	RS1/16SS471J
R 4630	(A,58,49)	RAB4CQ473J
R 4635	(A,76,70)	RS1/16SS102J
R 4636	(A,75,70)	RS1/16SS472J
R 4665	(A,64,11)	RS1/16SS1002D
R 4666	(A,65,14)	RS1/16SS1002D
R 4667	(A,60,12)	RS1/16SS1002D
R 4668	(A,65,12)	RS1/16SS5602F
R 4669	(A,64,15)	RS1/16SS5602F
R 4670	(A,62,14)	RS1/16SS5602F
R 4671	(A,63,9)	RS1/16SS5602F
R 4672	(A,67,14)	RS1/16SS5602F
R 4673	(A,60,10)	RS1/16SS5602F
R 4674	(A,65,9)	RS1/16SS102J
R 4675	(A,67,12)	RS1/16SS102J
R 4676	(A,62,10)	RS1/16SS102J
R 4692	(A,41,12)	RS1/16S103J
R 4701	(A,88,47)	RS1/10S103J
R 4708	(A,99,30)	RS1/16S0R0J
R 5002	(B,7,67)	RS1/16S621J
R 5003	(B,9,63)	RS1/16S103J
R 5004	(B,11,63)	RS1/16S104J
R 5005	(B,7,66)	RS1/16S473J
R 5006	(B,8,70)	RS1/16S621J
R 5007	(B,4,68)	RS1/16S821J

Circuit Symbol and No.			Part No.
R 5008	(B,12,73)		RS1/16S101J
R 5009	(B,12,70)		RS1/16S101J
R 5221	(A,8,10)		RS1/16SS151J
R 5222	(A,5,12)		RS1/16SS151J
R 5223	(A,5,14)		RS1/16SS101J
R 5224	(A,5,15)		RS1/16SS101J
R 5342	(B,9,31)		RS1/16S103J
R 5343	(B,5,37)		RS1/16S333J
R 5344	(B,5,33)		RS1/16S473J
R 5345	(B,5,29)		RS1/16S472J
R 5346	(B,4,66)		RS1/16S513J
R 5347	(B,4,72)		RS1/16S105J
R 5348	(A,12,44)		RS1/16S563J
R 5349	(A,5,47)		RS1/16S103J
R 5351	(A,9,47)		RS1/16S103J
R 5353	(B,4,92)		RS1/16S511J
R 5371	(B,7,35)		RS1/16S103J
R 5372	(A,8,30)		RS1/16S104J
R 5373	(B,8,36)		RS1/16S473J
R 5374	(B,11,37)		RS1/16S105J
R 5378	(B,12,30)		RS1/16S102J

CAPACITORS

Circuit Symbol and No.			Part No.
C 4001	(A,104,43)		CKSSYF104Z16
C 4002	(A,104,39)		CKSSYF104Z16
C 4003	(A,104,37)		CKSSYF104Z16
C 4004	(A,104,33)		CKSSYF104Z16
C 4005	(A,104,31)		CKSSYF104Z16
C 4006	(A,104,27)		CKSSYF104Z16
C 4007	(A,104,25)		CKSSYF104Z16
C 4008	(A,104,22)		CKSSYF104Z16
C 4009	(A,107,18)		CKSSYF104Z16
C 4011	(A,109,18)		CKSSYF104Z16
C 4012	(A,111,18)		CKSSYF104Z16
C 4013	(A,114,18)		CKSSYF104Z16
C 4014	(A,105,14)		CCSSCH9R0D50
C 4015	(A,110,12)		CCSSCH9R0D50
C 4016	(A,113,16)		CKSSYB103K16
C 4017	(A,112,14)		CCSSCH181J25
C 4018	(A,116,18)		CKSSYF104Z16
C 4019	(A,115,16)		CCSSCH4R0C50
C 4020	(A,113,14)		CKSSYF104Z16
C 4022	(A,116,14)		CKSSYB104K10
C 4023	(A,117,15)		CKSSYB104K10
C 4024	(A,117,17)		CKSSYB104K10
C 4025	(A,119,18)		CKSSYF104Z16
C 4026	(A,121,12)		CKSSYB104K10
C 4027	(A,122,13)		CKSSYB104K10
C 4028	(A,120,14)		CKSSYB104K10
C 4030	(A,121,18)		CKSSYF104Z16
C 4031	(A,123,15)		CKSSYB104K10
C 4032	(A,122,17)		CKSSYB104K10
C 4033	(A,123,17)		CKSSYB104K10
C 4034	(A,124,17)		CKSSYB104K10
C 4035	(A,125,18)		CKSSYF104Z16
C 4036	(A,125,12)		CKSSYB104K10
C 4037	(A,126,12)		CKSSYB104K10
C 4038	(A,127,12)		CKSSYB104K10
C 4039	(A,127,16)		CKSSYB104K10
C 4040	(A,128,16)		CKSSYB104K10
C 4041	(A,128,18)		CKSSYF104Z16
C 4043	(A,133,11)		CKSRYB104K50
C 4044	(A,129,18)		CKSSYF104Z16
C 4045	(A,133,21)		CKSSYF104Z16
C 4046	(A,134,23)		CKSSYF104Z16
C 4047	(A,133,25)		CKSSYF104Z16
C 4049	(A,134,27)		CKSSYF104Z16
C 4053	(A,133,31)		CKSSYF104Z16
C 4054	(A,133,35)		CKSSYF104Z16
C 4055	(A,133,37)		CKSSYF104Z16
C 4056	(A,133,38)		CKSSYF104Z16
C 4057	(A,134,40)		CKSSYF104Z16
C 4058	(A,135,41)		CKSSYF104Z16
C 4059	(A,134,42)		CKSSYF104Z16
C 4060	(A,133,45)		CKSRYF105Z10
C 4062	(A,137,33)		CKSSYF104Z16
C 4068	(A,126,47)		CKSSYF104Z16
C 4069	(A,124,48)		CKSSYF104Z16
C 4076	(A,120,47)		CKSSYF104Z16
C 4083	(A,115,47)		CKSSYF104Z16
C 4085	(A,113,47)		CKSSYF104Z16
C 4089	(A,101,48)		CSZSR330M10
C 4090	(A,113,48)		CKSSYF104Z16
C 4091	(A,49,58)		CKSRYB104K50
C 4092	(A,109,47)		CKSSYF104Z16
C 4093	(A,106,46)		CKSSYF104Z16
C 4094	(A,115,10)		CKSYF105Z16
C 4095	(A,133,15)		CSZSR330M10
C 4096	(A,97,14)		CKSYF105Z16
C 4097	(A,141,43)		CSZS100M16
C 4098	(A,100,41)		CSZSR220M10
C 4099	(A,100,20)		CSZSR220M10
C 4100	(A,101,45)		CSZSR330M10
C 4101	(A,144,47)		CKSSYF104Z16
C 4102	(A,99,71)		CKSSYF104Z16
C 4103	(A,144,44)		CKSRYB105K6R3
C 4104	(A,145,39)		CKSRYB104K50
C 4105	(A,144,37)		CKSSYF104Z16
C 4106	(A,145,25)		CKSRYB104K50
C 4107	(A,141,38)		CSZSR220M16
C 4108	(A,147,25)	4.7µF	CCG1111
C 4109	(A,96,70)		CSZS100M16
C 4111	(A,149,37)		CKSRYB105K6R3
C 4112	(A,151,33)		CKSRYB104K50
C 4121	(A,91,57)		CKSRYF104Z16
C 4122	(A,98,53)		CKSSYF104Z16
C 4123	(A,97,51)		CSZS100M16
C 4151	(A,134,51)		CKSSYF104Z16
C 4152	(A,128,58)		CKSSYF104Z16
C 4153	(A,136,52)		CKSRYB104K50
C 4154	(A,135,56)		CKSRYB104K50
C 4155	(A,134,55)		CKSSYF104Z16
C 4156	(A,128,56)		CSZSR330M10
C 4157	(A,138,56)		CKSQYF334Z25
C 4158	(A,132,52)		CSZS100M16
C 4161	(A,130,51)		CKSSYF104Z16
C 4162	(A,146,53)		CKSRYB104K50
C 4163	(A,140,53)	4.7µF	CCG1111
C 4164	(A,141,56)		CKSRYB104K50

Circuit Symbol and No.			Part No.
C 4172	(A,144,12)		CKSRYB104K50
C 4181	(A,20,27)		CKSQYF105Z25
C 4182	(A,30,27)		CKSQYF105Z25
C 4183	(A,29,29)		CKSRYB104K50
C 4184	(A,24,33)		CKSQYF105Z25
C 4188	(A,13,31)		CKSQYF105Z25
C 4190	(A,11,41)		CKSQYF225Z16
C 4191	(A,11,40)		CKSQYF225Z16
C 4192	(A,11,43)		CKSQYF105Z25
C 4193	(A,15,35)		CKSRYF474Z16
C 4194	(A,16,31)		CKSRYF474Z16
C 4195	(A,20,31)		CKSYF475Z16
C 4196	(A,26,35)		CKSRYB472K50
C 4197	(A,29,35)		CKSRYB472K50
C 4198	(A,26,23)		CKSQYF105Z25
C 4199	(A,15,37)		CKSRYF474Z16
C 4200	(A,11,35)		CKSQYF105Z25
C 4201	(A,43,30)	33µF/10V	CCH1586
C 4202	(A,40,29)		CKSRYB104K50
C 4203	(A,33,39)		CKSRYB103K50
C 4204	(A,36,38)	10µF	CCG1138
C 4205	(A,27,38)		CKSRYB103K50
C 4206	(A,28,38)		CKSRYB105K6R3
C 4207	(A,10,27)		CKSQYF105Z25
C 4208	(A,30,45)		CKSRYB102K50
C 4209	(A,29,42)		CKSRYB104K50
C 4210	(A,46,62)		CKSQYF105Z25
C 4211	(A,30,47)		CKSRYB105K6R3
C 4212	(A,36,45)	10µF	CCG1138
C 4213	(A,30,48)		CKSRYB104K50
C 4214	(A,39,45)	10µF	CCG1138
C 4215	(A,38,51)		CKSRYB104K50
C 4216	(A,41,53)	68µF/6.3V	CCH1440
C 4217	(A,25,53)		CCSRCH101J50
C 4219	(A,26,49)		CKSRYB103K50
C 4221	(A,26,55)		CCSRCH331J50
C 4223	(A,26,57)		CKSRYB393K16
C 4224	(A,22,56)		CKSRYB103K50
C 4226	(A,22,59)		CKSRYB473K50
C 4228	(A,17,53)		CKSRYB393K16
C 4229	(A,14,47)		CKSRYB393K16
C 4230	(A,32,62)		CKSRYB102K50
C 4231	(A,17,50)		CKSRYB104K50
C 4232	(A,19,51)		CSZS100M16
C 4233	(A,14,48)		CKSRYB105K6R3
C 4234	(A,10,50)		CKSRYB104K50
C 4235	(A,21,31)		CKSRYB103K50
C 4236	(A,81,24)		CKSRYF105Z10
C 4237	(A,80,31)		CKSSYB104K10
C 4238	(A,77,31)		CSZS100M10
C 4239	(A,17,38)		CKSSYF104Z16
C 4240	(A,33,45)		CKSRYB103K50
C 4241	(A,75,20)		CKSRYF105Z10
C 4242	(A,74,13)		CKSSYB104K10
C 4243	(A,71,15)		CSZS100M10
C 4244	(A,77,24)		CSZS100M16
C 4245	(A,75,12)		CKSSYF104Z16
C 4248	(A,77,28)		CKSSYB104K10
C 4261	(A,41,10)		CKSRYB104K50
C 4301	(A,30,6)		CKSRYB105K6R3

Circuit Symbol and No.			Part No.
C 4302	(A,33,10)		CKSRYB104K50
C 4311	(B,7,114)		CKSRYB474K10
C 4312	(B,7,115)		CKSRYB104K50
C 4313	(B,4,117)		CKSRYB104K50
C 4314	(B,10,117)		CKSRYB104K50
C 4315	(B,5,106)		CKSRYB104K50
C 4371	(B,6,65)		CKSRYB104K50
C 4372	(B,6,80)		CKSRYB104K50
C 4373	(B,6,95)		CKSRYB104K50
C 4430	(A,91,18)		CCSSCH470J50
C 4431	(A,90,18)		CCSSCH680J50
C 4432	(A,89,18)		CCSSCH470J50
C 4433	(A,85,15)	10µF	CCG1171
C 4438	(A,81,13)		CKSSYF104Z16
C 4439	(A,90,12)		CCSSCH5R0C50
C 4440	(A,82,16)		CSZSR330M10
C 4452	(A,141,30)		CKSSYB104K10
C 4453	(A,143,19)		CKSSYB104K10
C 4454	(A,144,30)		CKSSYB104K10
C 4455	(A,149,18)		CSZS100M10
C 4501	(A,38,81)		CKSSYB102K10
C 4502	(A,37,85)		CKSSYB102K10
C 4503	(A,37,78)		CKSSYB102K10
C 4504	(A,38,75)		CKSSYB102K10
C 4506	(A,34,76)		CKSSYB102K10
C 4507	(A,33,78)		CKSSYB102K10
C 4508	(A,33,75)		CKSRYB105K6R3
C 4521	(A,82,80)	10µF	CCG1138
C 4522	(A,78,80)	10µF	CCG1138
C 4531	(A,57,41)		CKSSYB104K10
C 4541	(A,21,68)		CKSQYF224Z25
C 4601	(A,49,75)		CSZSR330M10
C 4602	(A,47,73)		CKSSYB104K10
C 4603	(A,45,72)		CKSQYB225K10
C 4604	(A,36,70)		CSZS330M6R3
C 4608	(A,70,50)		CKSSYB104K10
C 4609	(A,64,41)		CKSSYB104K10
C 4610	(A,62,41)		CKSSYB104K10
C 4611	(A,45,66)		CKSSYB104K10
C 4668	(A,76,40)		CCG1179
C 4669	(A,75,49)		CCG1179
C 4670	(A,77,40)		CCG1179
C 4691	(A,35,16)		CKSSYB104K10
C 5002	(B,10,69)		CKSRYB104K50
C 5343	(B,10,34)		CKSRYB104K50
C 5344	(B,12,40)		CKSRYB105K10
C 5345	(A,13,34)		CKSQYB474K16
C 5346	(B,8,38)		CKSRYF105Z10
C 5347	(B,8,40)		CKSRYF104Z50
C 5348	(B,4,38)		CKSRYB332K50
C 5349	(B,4,41)		CKSRYB152K50
C 5352	(B,12,39)		CKSRYB103K50
C 5353	(A,5,51)		CKSRYB473K50
C 5354	(B,11,50)		CFHXSQ221J50
C 5355	(A,12,47)		CKSRYB473K50
C 5356	(B,8,54)	10µF	CCG1138
C 5357	(B,8,58)	10µF	CCG1138
C 5358	(A,10,59)		CKSQYB105K10
C 5359	(A,8,99)	22pF	CCG1140
C 5361	(B,4,89)		CKSRYB223K50

Circuit Symbol and No.		Part No.
C 5362	(A,12,59)	CKSQYB105K10
C 5371	(B,13,12)	CKSRYF104Z50
C 5372	(B,8,9)	CKSRYF105Z10
C 5391	(B,12,27)	CKSRYF104Z50

I

Unit Number:CWM9827
Unit Name:Keyboard Unit

MISCELLANEOUS

IC 5501	(A,19,11) IC	TSOP4840SB1
D 5502	(A,58,5) LED	CL-190UB2-X
D 5503	(A,121,5) LED	CL-190UB2-X
D 5504	(A,95,5) LED	CL-190UB2-X
D 5505	(A,71,5) LED	CL-190UB2-X
D 5506	(A,44,5) LED	CL-190UB2-X
D 5507	(A,108,5) LED	CL-190UB2-X
D 5508	(A,84,12) LED	CL-190UB2-X
D 5509	(B,24,12) Diode	UDZS6R8(B)
D 5510	(A,27,4) LED	CL-195PG-CD
D 5512	(A,154,5) LED	CL-195PG-CD
D 5514	(A,139,12) LED	CL-195PG-CD
D 5516	(A,11,14) LED	CL-195PG-CD
D 5518	(A,159,10) LED	CL-195PG-CD
D 5520	(A,138,4) LED	CL-195PG-CD
D 5522	(A,11,6) LED	CL-195PG-CD
D 5524	(A,154,14) LED	CL-195PG-CD
D 5526	(A,150,9) LED	CL-195PG-CD
D 5528	(A,100,11) LED	CL-195SR-CD
S 5501	(A,44,3) Push Switch	CSG1155
S 5502	(A,75,3) Push Switch	CSG1155
S 5503	(A,54,3) Push Switch	CSG1155
S 5504	(A,9,17) Push Switch	CSG1155
S 5505	(A,9,3) Push Switch	CSG1155
S 5506	(A,24,4) Push Switch	CSG1155
S 5507	(A,91,3) Push Switch	CSG1155
S 5508	(A,112,3) Push Switch	CSG1155
S 5509	(A,121,3) Push Switch	CSG1155
S 5510	(A,142,4) Push Switch	CSG1155
S 5511	(A,162,10) Push Switch	CSG1155
S 5512	(A,154,17) Push Switch	CSG1155
S 5513	(A,154,3) Push Switch	CSG1155
S 5514	(A,147,10) Push Switch	CSG1155
S 5515	(A,143,14) Push Switch	CSG1155
S 5516	(A,162,20) Push Switch	CSG1155
S 5517	(A,83,8) Switch	CSN1057

RESISTORS

Circuit Symbol and No.		Part No.
R 5501	(B,63,6)	RS1/16S122J
R 5502	(A,63,4)	RS1/16S202J
R 5503	(B,24,5)	RS1/16S392J
R 5504	(B,7,9)	RS1/16S123J
R 5505	(B,60,9)	RS1/16S220J
R 5506	(A,83,4)	RS1/16S122J
R 5507	(B,112,6)	RS1/16S202J
R 5508	(B,116,6)	RS1/16S392J
R 5509	(B,142,6)	RS1/16S123J
R 5510	(B,156,6)	RS1/16S122J
R 5511	(B,160,12)	RS1/16S202J
R 5512	(B,159,10)	RS1/16S392J
R 5513	(B,146,8)	RS1/16S123J
R 5515	(B,44,6)	RS1/16S221J
R 5516	(B,106,4)	RS1/16S221J
R 5517	(B,94,9)	RS1/16S221J
R 5518	(B,70,5)	RS1/16S391J
R 5519	(B,47,6)	RS1/16S221J
R 5520	(B,109,4)	RS1/16S221J
R 5521	(B,96,9)	RS1/16S221J
R 5522	(B,73,5)	RS1/16S391J
R 5523	(B,50,6)	RS1/16S221J
R 5524	(B,112,4)	RS1/16S221J
R 5525	(B,97,9)	RS1/16S221J
R 5526	(B,73,4)	RS1/16S331J
R 5527	(B,40,5)	RS1/16S151J
R 5528	(B,156,14)	RS1/16S151J
R 5529	(B,136,12)	RS1/16S151J
R 5530	(B,38,5)	RS1/16S121J
R 5531	(B,157,12)	RS1/16S121J
R 5532	(B,138,12)	RS1/16S121J
R 5533	(B,36,5)	RS1/16S121J
R 5534	(B,157,10)	RS1/16S121J
R 5535	(B,139,12)	RS1/16S121J
R 5536	(B,32,10)	RS1/16S103J
R 5537	(B,33,12)	RS1/16S101J
R 5538	(B,34,5)	RS1/16S121J
R 5539	(B,157,8)	RS1/16S121J
R 5540	(B,137,9)	RS1/16S121J
R 5541	(B,29,9)	RS1/16S101J
R 5542	(B,105,10)	RS1/16S101J
R 5543	(B,105,11)	RS1/16S101J

CAPACITORS

C 5501	(A,59,4)	CKSRYB104K50
C 5502	(A,121,7)	CKSRYB104K50
C 5503	(A,96,4)	CKSRYB104K50
C 5504	(A,70,4)	CKSRYB104K50
C 5505	(A,44,7)	CKSRYB104K50
C 5506	(A,106,4)	CKSRYB104K50
C 5507	(A,86,11)	CKSRYB104K50
C 5508	(B,26,10)	CKSYB475K1

C

Unit Number:CWX3170
Unit Name:DVD Core Unit

MISCELLANEOUS

IC 1001	IC	S-L2980A50MC-C7J
IC 1002	IC	R1130H501B
IC 1003	IC	LTC3411EMS
IC 1051	IC	PE5401A
IC 1201	IC	AN8471SAT1
IC 1231	IC	TC7SZ125FU
IC 1251	IC	BA5985FM
IC 1501	IC	MN35104UB
IC 1570	IC	K4S283232E-TC75
IC 1601	IC	PD6516A
IC 1602	IC	TC7SH86FU

A B C D E F

Circuit Symbol and No.		Part No.
IC 1651	IC	M5M5V216ATP-70HI
IC 1652	IC	TC7SZ126FU
IC 1671	IC	TC74LCX16373AFT
IC 1672	IC	TC7SZ08FU
IC 1801	IC	SM8707LV
IC 1802	IC	TC7WH157FU
IC 1851	IC	PCM1742KE
IC 1852	IC	NJM2140R
IC 1853	IC	NJM2100V
Q 1002	Transistor	DTC114EU
Q 1101	Transistor	2SB1260
Q 1102	Transistor	2SB1260
Q 1103	Transistor	DTC114EU
Q 1104	Transistor	2SA1576A
Q 1105	Transistor	2SC4081
Q 1106	Transistor	2SC4081
Q 1107	Transistor	2SC4081
Q 1551	Transistor	2SA1576
D 1001	Diode	1SR154-400
D 1101	Diode	1SS355
D 1102	Diode	1SS355
D 1241	Chip LED	CL205IRXTU
L 1001	Inductor	CTF1623
L 1002	Inductor	CTF1624
L 1003	Inductor	CTF1558
L 1004	Inductor	CTF1558
L 1051	Inductor	CTF1473
L 1101	Inductor	CTF1305
L 1501	Inductor	CTF1378
L 1502	Inductor	CTF1487
L 1503	Inductor	CTF1488
L 1554	Inductor	CTF1473
L 1555	Inductor	CTF1473
L 1556	Inductor	CTF1400
L 1557	Inductor	CTF1395
L 1558	Inductor	CTF1473
L 1561	Inductor	CTF1473
L 1601	Inductor	CTF1464
L 1651	Inductor	CTF1464
L 1671	Inductor	CTF1473
L 1801	Inductor	CTF1558
L 1802	Inductor	CTF1558
L 1803	Inductor	CTF1464
L 1804	Inductor	CTF1468
L 1851	Inductor	CTF1471
L 1852	Inductor	CTF1473
L 1901	Inductor	CTF1487
L 1902	Inductor	CTF1558
L 1903	Inductor	CTF1558
L 1904	Inductor	CTF1468
L 1905	Inductor	CTF1468
X 1051	Resonator 4.91MHz	CSS1668
X 1801	Resonator 27.0000MHz	CSS1661
VR1551	Semi-fixed 10kΩ(B)	CCP1448
EF1801	Chp EMI Filter	DTL1106
EF1802	Chp EMI Filter	DTL1106
EF1803	Chp EMI Filter	DTL1106
EF1901	Chp EMI Filter	DTL1106
EF1902	Chp EMI Filter	DTL1106
EF1903	Chp EMI Filter	DTL1106

Circuit Symbol and No.		Part No.
EF1904	Chp EMI Filter	DTL1106
EF1905	Chp EMI Filter	DTF1106

RESISTORS

	Part No.
R 1001	RS1/10S0R0J
R 1003	RS1/16SS1003D
R 1004	RS1/10S0R0J
R 1005	RS1/16SS1501D
R 1006	RS1/16SS8202D
R 1007	RS1/16SS1502D
R 1008	RS1/16SS101J
R 1010	RS1/16SS105J
R 1011	RS1/16SS105J
R 1013	RS1/16SS103J
R 1014	RS1/16SS1203D
R 1015	RS1/16SS2402D
R 1016	RS1/16SS0R0J
R 1017	RS1/16SS0R0J
R 1018	RS1/16SS105J
R 1021	RS1/16SS122J
R 1051	RS1/16SS104J
R 1052	RS1/16SS104J
R 1053	RS1/16SS104J
R 1054	RS1/16SS104J
R 1055	RS1/16SS222J
R 1057	RS1/16SS104J
R 1058	RS1/16SS0R0J
R 1059	RS1/16SS104J
R 1060	RS1/16SS104J
R 1061	RS1/16SS221J
R 1062	RS1/16SS104J
R 1063	RS1/16SS104J
R 1064	RS1/16SS104J
R 1065	RS1/16SS104J
R 1066	RS1/16SS104J
R 1067	RS1/16SS104J
R 1068	RS1/16SS221J
R 1069	RS1/16SS221J
R 1070	RS1/16SS221J
R 1071	RS1/16SS221J
R 1072	RS1/16SS104J
R 1073	RS1/16SS104J
R 1074	RS1/16SS104J
R 1075	RS1/16SS472J
R 1076	RS1/16SS104J
R 1080	RS1/16SS0R0J
R 1081	RS1/16SS221J
R 1082	RS1/16SS473J
R 1083	RS1/16S153J
R 1084	RS1/16SS104J
R 1085	RS1/16S823J
R 1087	RS1/16S104J
R 1088	RS1/16SS104J
R 1089	RS1/16SS104J
R 1090	RAB4CQ104J
R 1101	RS1/16S6R8J
R 1102	RS1/16SS3R9J
R 1103	RS1/16SS3R9J
R 1104	RS1/16SS3R9J

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
R 1105	RS1/16SS3R9J	R 1501	RS1/16SS0R0J
R 1106	RS1/16S6R8J	R 1502	RS1/16SS0R0J
R 1107	RS1/16SS3R9J	R 1503	RAB4CQ101J
R 1108	RS1/16SS3R9J	R 1504	RS1/16SS0R0J
R 1109	RS1/16SS3R9J	R 1505	RS1/16SS0R0J
R 1110	RS1/16SS3R9J	R 1506	RAB4CQ101J
R 1111	RS1/16SS272J	R 1507	RS1/16SS0R0J
R 1112	RS1/16SS472J	R 1508	RAB4CQ101J
R 1113	RS1/16SS102J	R 1509	RS1/16SS0R0J
R 1114	RS1/16SS221J	R 1511	RAB4CQ101J
R 1115	RS1/16SS221J	R 1512	RS1/16SS0R0J
R 1116	RS1/16SS331J	R 1513	RS1/16SS473J
R 1117	RS1/16SS221J	R 1514	RS1/16SS104J
R 1118	RS1/16SS0R0J	R 1515	RS1/16SS222J
R 1119	RS1/16SS0R0J	R 1518	RS1/16SS104J
R 1120	RS1/16SS0R0J	R 1519	RS1/16SS104J
R 1121	RS1/16SS0R0J	R 1522	RS1/16SS103J
R 1128	RS1/16S0R0J	R 1523	RS1/16SS104J
R 1129	RS1/16S0R0J	R 1525	RS1/16SS102J
R 1130	RS1/16S0R0J	R 1530	RS1/16SS104J
R 1131	RS1/16S0R0J	R 1531	RS1/16S221J
R 1201	RS1/16SS181J	R 1532	RS1/16SS104J
R 1202	RS1/16SS181J	R 1536	RS1/16SS104J
R 1203	RS1/16SS513J	R 1537	RS1/16SS104J
R 1204	RS1/16SS221J	R 1540	RS1/16SS221J
R 1206	RS1/16SS513J	R 1541	RS1/16SS473J
R 1207	RS1/16S0R0J	R 1543	RS1/16SS104J
R 1208	RS1/16S0R0J	R 1544	RS1/16SS102J
R 1211	RS1/16SS1R0J	R 1545	RS1/16SS102J
R 1212	RS1/16SS1R0J	R 1546	RS1/16SS104J
R 1213	RS1/16SS1R0J	R 1547	RS1/16SS330J
R 1214	RS1/16SS1R0J	R 1548	RS1/16SS104J
R 1215	RS1/16SS1R0J	R 1551 Inductor	CTF1387
R 1216	RS1/16SS1R0J	R 1552	RS1/16S101J
R 1231	RS1/16SS822J	R 1555	RS1/16S101J
R 1232	RS1/16SS822J	R 1556	RS1/16S101J
R 1233	RS1/16SS822J	R 1558	RS1/16SS750J
R 1234	RS1/16SS822J	R 1561	RS1/16SS153J
R 1235	RS1/16SS563J	R 1562	RS1/16SS471J
R 1236	RS1/16SS243J	R 1563	RS1/16SS471J
R 1237	RS1/16SS683J	R 1565	RS1/16S68R0D
R 1238	RS1/16SS243J	R 1566	RS1/16S4R7J
R 1240	RS1/16S471J	R 1567	RS1/16SS273J
R 1241	RS1/16S391J	R 1568	RS1/16SS183J
R 1246	RS1/16SS104J	R 1569	RS1/16SS153J
R 1248	RS1/16SS0R0J	R 1571	RAB4CQ101J
R 1251	RS1/16SS221J	R 1572	RAB4CQ101J
R 1252	RS1/16SS221J	R 1573	RAB4CQ101J
R 1253	RS1/16SS393J	R 1574	RAB4CQ101J
R 1254	RS1/16SS223J	R 1575	RS1/16SS560J
R 1256	RS1/16SS102J	R 1576	RS1/16SS560J
R 1257	RS1/16SS0R0J	R 1577	RAB4CQ560J
R 1258	RS1/16SS393J	R 1578	RAB4CQ560J
R 1259	RS1/16SS393J	R 1579	RS1/16SS220J
R 1260	RS1/16SS393J	R 1580	RAB4CQ560J
R 1261	RS1/16SS393J	R 1581	RS1/16SS560J
R 1262	RS1/16SS221J	R 1582	RS1/16SS560J
R 1263	RS1/16S0R0J	R 1583	RS1/16SS560J
R 1269	RS1/16SS102J	R 1584	RAB4CQ560J
R 1270	RS1/16SS102J	R 1585	RS1/16SS560J

Circuit Symbol and No.	Part No.
R 1586	RS1/16SS560J
R 1587	RAB4CQ101J
R 1588	RAB4CQ101J
R 1589	RAB4CQ101J
R 1590	RAB4CQ101J
R 1593	RS1/16SS104J
R 1594	RS1/16S0R0J
R 1599	RS1/16S221J
R 1604	RS1/16SS0R0J
R 1608	RS1/16SS104J
R 1613	RS1/16SS0R0J
R 1652	RS1/16SS104J
R 1653	RS1/16SS510J
R 1671	RAB4CQ101J
R 1672	RAB4CQ101J
R 1673	RAB4CQ101J
R 1674	RAB4CQ101J
R 1675	RS1/16SS331J
R 1701	RS1/16SS103J
R 1702	RS1/16SS103J
R 1703	RS1/16SS0R0J
R 1704	RS1/16SS105J
R 1705	RN1/16SE1002D
R 1706	RS1/16SS222J
R 1708	RS1/16SS223J
R 1709	RS1/16S1502D
R 1710	RS1/16SS102J
R 1711	RS1/16SS683J
R 1712	RS1/16SS103J
R 1713	RS1/16SS103J
R 1714	RS1/16SS0R0J
R 1715	RS1/16SS0R0J
R 1716	RS1/16SS0R0J
R 1717	RS1/16SS0R0J
R 1718	RS1/16SS103J
R 1719	RS1/16SS103J
R 1720	RS1/16SS103J
R 1721	RS1/16SS103J
R 1723	RN1/16SE3901D
R 1724	RS1/16SS0R0J
R 1729	RAB4CQ220J
R 1730	RAB4CQ220J
R 1801	RS1/16S0R0J
R 1802	RS1/16S151J
R 1803	RS1/16S151J
R 1804	RS1/16S221J
R 1805	RS1/16S271J
R 1806	RS1/16SS104J
R 1807	RS1/16S560J
R 1809	RS1/16SS0R0J
R 1821	RS1/16SS222J
R 1823	RS1/16SS101J
R 1851	RS1/16SS0R0J
R 1856	RS1/16SS102J
R 1857	RS1/16SS102J
R 1858	RS1/16SS222J
R 1859	RS1/16SS222J
R 1860	RS1/16SS472J
R 1861	RS1/16SS472J
R 1862	RS1/16SS472J
R 1863	RS1/16SS472J
R 1864	RS1/16SS103J
R 1865	RS1/16SS103J
R 1866	RS1/16SS472J
R 1867	RS1/16SS472J
R 1868	RS1/16SS821J
R 1869	RS1/16SS821J
R 1870	RS1/16SS104J
R 1871	RS1/16SS104J
R 1872	RS1/16SS0R0J
R 1873	RS1/16SS0R0J
R 1874	RS1/16SS0R0J
R 1876	RS1/16SS0R0J
R 1877	RS1/16SS0R0J
R 1885	RS1/16SS0R0J
R 1897	RS1/16SS0R0J
R 1899	RS1/16SS0R0J
R 1901	RS1/16SS221J
R 1903	RS1/16SS221J
R 1908	RS1/16SS102J
R 1913	RS1/16S0R0J
R 1922	RS1/16SS0R0J
R 1923	RS1/16SS221J
R 1925	RS1/16S0R0J
R 1927	RS1/16SS0R0J
R 1928	RS1/16SS221J
R 1954	RS1/16SS221J
R 1955	RS1/16SS221J
R 1961	RS1/16S0R0J

CAPACITORS

Circuit Symbol and No.		Part No.
C 1001		CKSRYB105K10
C 1002		CKSRYB104K25
C 1003		CKSRYB104K25
C 1004		CKSRYB104K25
C 1005		CKSRYB105K10
C 1006		CKSRYB104K25
C 1007	22µF	CCG1178
C 1008	22µF	CCG1178
C 1009		CCSSCH220J50
C 1010		CKSSYB102K16
C 1012	22µF	CCG1178
C 1013	22µF	CCG1178
C 1016		CKSRYB104K25
C 1051		CKSYB106K6R3
C 1052		CKSSYB104K10
C 1053		CKSSYB104K10
C 1054		CKSSYB103K16
C 1055		CKSSYB103K16
C 1058		CKSSYB471K50
C 1059		CKSSYB104K10
C 1060		CKSRYB105K10
C 1101		CSZSR220M16
C 1102		CSZSR101M6R3
C 1103		CKSSYB104K10
C 1104		CKSSYB103K16
C 1105		CSZSR101M6R3
C 1106		CKSSYB104K10
C 1107		CKSSYB103K16
C 1108		CKSRYB104K25

Circuit Symbol and No.	Part No.	Circuit Symbol and No.	Part No.
C 1109	CKSSYB473K10	C 1556	CSZSR470M10
C 1110	CKSSYB473K10	C 1557	CKSSYB104K10
C 1111	CKSSYB103K16	C 1558	CSZS4R7M16
C 1112	CKSRYB105K10	C 1559	CKSRYB105K10
C 1113	CKSRYB105K10	C 1561	CKSSYB102K50
C 1114	CKSSYB103K16	C 1570	CSZSR470M10
C 1115	CSZSR220M16	C 1571	CKSSYB104K10
C 1201	CEVW101M16	C 1572	CKSSYB104K10
C 1202	CKSRYB104K25	C 1573	CKSSYB104K10
C 1203	CSZSR220M16	C 1574	CKSSYB104K10
C 1204	CKSRYB104K25	C 1575	CKSSYB104K10
C 1205	CKSRYB104K25	C 1576	CKSSYB104K10
C 1206	CKSRYB104K25	C 1577	CKSSYB104K10
C 1207	CSZSR220M16	C 1578	CKSSYB104K10
C 1231	CKSRYB104K25	C 1579	CKSSYB104K10
C 1232	CKSSYB104K10	C 1580	CKSSYB104K10
C 1251	CKSRYB104K25	C 1581	CKSSYB104K10
C 1254	CKSRYB103K50	C 1582	CKSSYB104K10
C 1255	CKSRYB103K50	C 1583	CSZSR470M10
C 1256	CEVW101M16	C 1601	CSZSR470M10
C 1257	CKSRYB104K25	C 1603	CKSSYB104K10
C 1258	CCSSCH470J50	C 1651	CSZSR470M10
C 1259	CCSSCH5R0C50	C 1653	CKSSYB104K10
C 1501	CSZSR470M10	C 1654	CKSRYB104K25
C 1502	CSZSR101M6R3	C 1655	CKSSYB104K10
C 1503	CSZSR101M6R3	C 1671	CKSSYB104K10
C 1504	CKSSYB104K10	C 1672	CKSSYB104K10
C 1505	CKSSYB104K10	C 1673	CKSSYB104K10
C 1506	CKSSYB104K10	C 1674	CKSSYB104K10
C 1507	CKSSYB104K10	C 1675	CKSRYB104K25
C 1508	CKSSYB104K10	C 1676	CKSYB106K6R3
C 1509	CKSSYB104K10	C 1701	CKSRYB104K25
C 1510	CKSSYB104K10	C 1702	CKSRYB104K25
C 1511	CKSSYB104K10	C 1703	CKSSYB104K10
C 1512	CKSSYB104K10	C 1704	CKSSYB103K16
C 1513	CKSSYB104K10	C 1705	CKSSYB103K16
C 1514	CKSSYB104K10	C 1706	CKSSYB104K10
C 1515	CKSSYB104K10	C 1707	CKSSYB104K10
C 1516	CKSSYB104K10	C 1708	CKSSYB103K16
C 1517	CKSSYB104K10	C 1709	CCSRCH221J50
C 1518	CKSSYB104K10	C 1710	CKSSYB152K50
C 1519	CKSSYB104K10	C 1711	CKSRYB105K10
C 1520	CKSSYB104K10	C 1712	CKSRYB105K10
C 1521	CKSSYB104K10	C 1713	CKSRYB105K10
C 1522	CKSSYB104K10	C 1715	CKSSYB104K10
C 1523	CKSSYB104K10	C 1716	CKSSYB104K10
C 1524	CKSSYB104K10	C 1717	CKSSYB104K10
C 1525	CKSSYB104K10	C 1718	CKSSYB104K10
C 1526	CKSSYB104K10	C 1719	CKSSYB562K25
C 1527	CKSSYB104K10	C 1720	CCSSCH101J50
C 1528	CKSSYB104K10	C 1721	CCSSCH470J50
C 1529	CKSSYB104K10	C 1722	CKSSYB103K16
C 1530	CKSSYB104K10	C 1723	CKSSYB104K10
C 1531	CKSSYB471K50	C 1724	CKSSYB104K10
C 1532	CKSSYB103K16	C 1725	CKSSYB104K10
C 1533	CKSSYB103K16	C 1726	CCSSCH330J50
C 1552	CKSSYB104K10	C 1727	CKSSYB333K16
C 1553	CKSRYB104K25	C 1728	CKSSYB104K10
C 1554	CKSSYB104K10	C 1733	CKSSYB103K16
C 1555	CKSRYB105K10	C 1801	CKSSYB104K10

Circuit Symbol and No.		Part No.
C 1802		CKSSYB104K10
C 1804		CKSSYB104K10
C 1805		CCSSCH100D50
C 1809		CCSSCJ3R0C50
C 1810		CCSSCK2R0C50
C 1811		CKSSYB104K10
C 1851		CKSSYB104K10
C 1852		CKSSYB104K10
C 1853		CKSYB106K6R3
C 1854		CKSYB106K6R3
C 1855		CKSRYB104K25
C 1856		CKSRYB104K25
C 1857		CCSRCH471J50
C 1858		CCSRCH471J50
C 1859		CCSRCH471J50
C 1860		CCSRCH471J50
C 1861		CKSQYB225K10
C 1862		CKSSYB471K50
C 1863		CKSSYB471K50
C 1864		CKSYB475K10
C 1865		CKSYB475K10
C 1870		CKSSYB104K10
C 1903		CKSRYB102K50

D

Unit Number:CWX3154
Unit Name:Compound Unit(A)

Q 1299	Photo-taransistor	CPT231SCTD
S 1201	Spring Switch(12cm)	CSN1069
S 1202	Spring Switch(8cm)	CSN1069
S 1203	Spring Switch(DISC SENS)	CSN1069
S 1204	Spring Switch(DISC SENS)	CSN1070
S 1205	Spring Switch(8cm)	CSN1070
R 1298		RS1/16S0R0J
R 1299		RS1/16S0R0J

E

Unit Number:CWX3156
Unit Name:Compound Unit(B)

S 1206	Switch(CLAMP)	CSN1051

J

Unit Number:CZW3087
Unit Name:Main Unit

MISCELLANEOUS

IC 3801	IC	BA00AST
IC 3802	IC	BA6247FP
IC 3803	IC	TA78L05F
IC 3804	IC	TC7S14FU
IC 3805	Photo-interrupter	GP2L24B
Q 3801	Transistor	DTC124EU
Q 3802	Transistor	2SA1037K
Q 3803	Transistor	DTC124EU
Q 3804	Transistor	UMD2N
D 3801	Diode	UDZS5R6(B)

Circuit Symbol and No.		Part No.
D 3802	Diode	1SS355
L 3801	Inductor	LCTA150J2520
L 3802	Inductor	LCTA150J2520

RESISTORS

R 3801		RS1/16S103J
R 3802		RS1/16S222J
R 3803		RS1/16S471J
R 3804		RS1/16S102J
R 3805		RS1/16S102J
R 3806		RS1/16S102J
R 3807		RS1/16S102J
R 3808		RS1/16S103J
R 3809		RS1/16S222J
R 3810		RS1/16S222J
R 3811		RS1/16S102J
R 3812		RS1/16S102J
R 3813		RS1/16S472J
R 3814		RS1/16S102J
R 3815		RS1/16S0R0J
R 3816		RS1/16S0R0J
R 3817		RS1/16S0R0J
R 3818		RS1/16S473J
R 3819		RS1/16S0R0J
R 3821		RS1/16S473J
R 3822		RS1/16S512J
R 3823		RS1/16S0R0J

CAPACITORS

C 3801		CKSQYB105K16
C 3802		CKSQYB105K16
C 3803		CKSRYB104K16
C 3804		CKSRYB104K16
C 3805		CKSRYB104K16
C 3806		CKSRYB223K50
C 3807		CKSRYB223K50
C 3808		CEVW101M16
C 3809		CEVW101M16
C 3810		CKSRYB104K16
C 3811		CEVW100M16
C 3812		CKSRYB104K16
C 3813		CKSRYB102K50
C 3815		CKSQYB104K50
C 3819		CEVW101M16

K

Unit Number:CZW3088
Unit Name:SW Unit

S 3831	Spring Switch(ANGLE)	CSN1052
S 3832	Spring Switch(LIFT)	CSN1052

L

Unit Number:CZW3089
Unit Name:Volume Unit

VR3841(ANGLE SENSE)		CCW1025

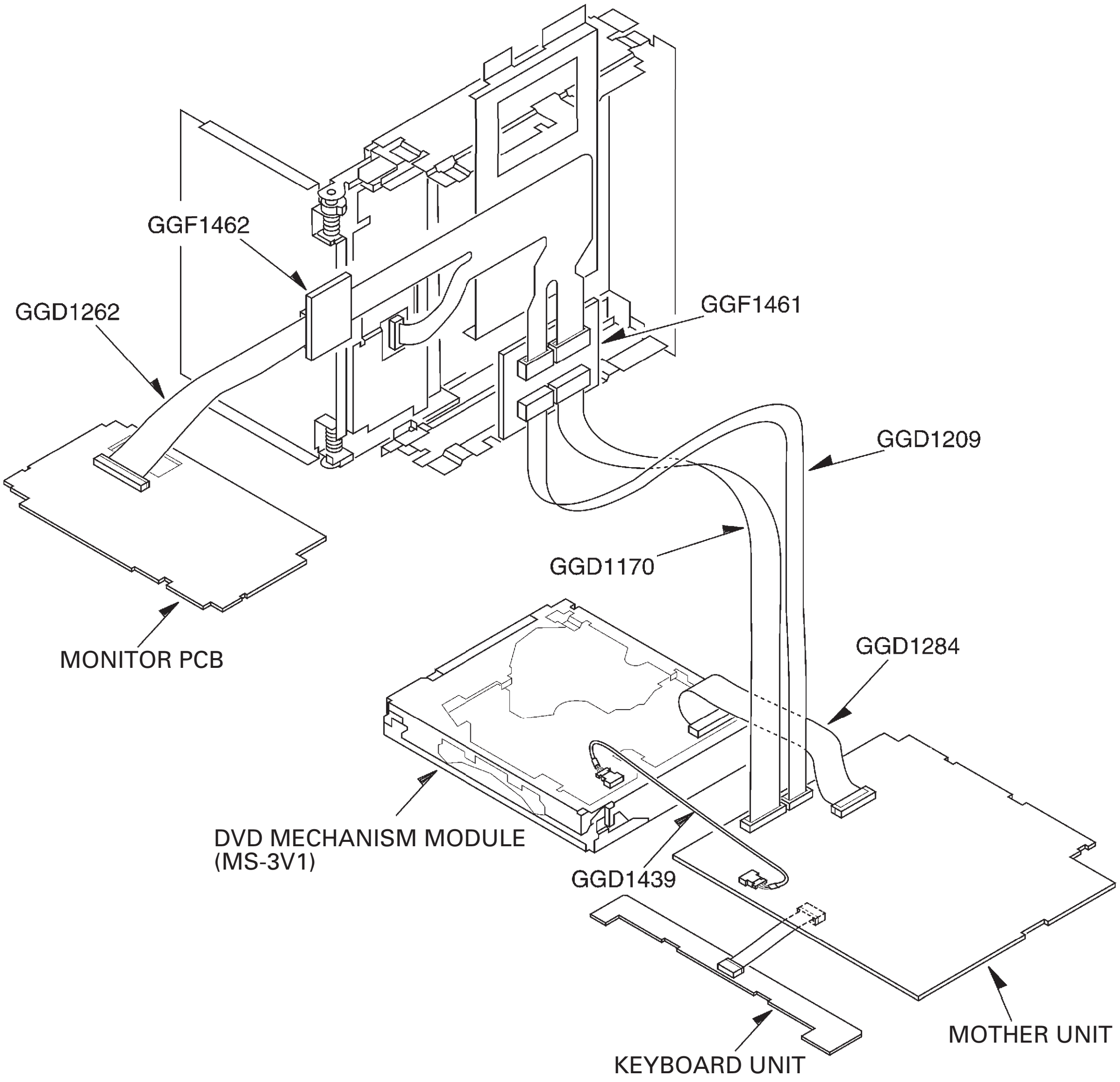
Circuit Symbol and No.		Part No.

Miscellaneous Parts List

	Pickup Unit(Service)	CXX1770
M 1	Motor Unit(LOADING)	CXC4659
M 2	Motor Unit(CARRIAGE)	CXC4134
M 3	Motor(SPINDLE)	CXM1272
M 771	Fan Motor(REAR)	CXM1262
M 781	Fan Motor(CENTER)	CXM1276
M 3001	Motor Unit(POSITION)	CXB9515
M 3002	Motor Unit(ANGLE)	CXB9516

6. ADJUSTMENT

6.1 JIG CONNECTION DIAGRAM


GGF1462
GGD1262
GGF1461
GGD1209
GGD1170
MONITOR PCB
GGD1284
DVD MECHANISM MODULE
(MS-3V1)
GGD1439
MOTHER UNIT
KEYBOARD UNIT

● **Jigs List**

Name	Jig No.	Remarks
33 pin extension cable	GGD1262	Connecting the monitor PCB to relay PCB(GGF1462)
Relay PCB	GGF1462	Connecting the monitor PCB extension cable to flexible PCB
Relay PCB	GGF1461	Connecting the monitor PCB extension cable to flexible PCB
20 pin extension cable	GGD1209	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1170	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1284	Connecting the mother unit to DVD mechanism module
2 pin extension cable	GGD1439	Connecting the mother unit to DVD mechanism module

6.2 DVD ADJUSTMENT

1) Precautions

This product uses 5V and 3.3V as standard voltages. The electrical potential that is the reference for signals, is not GND, but VREF (approximately 2.2V) and VHALF (approximately 1.65V).

During product adjustments, if the reference voltage is mistakenly taken as GND, and a grounding contact is made, not only would it be impossible to measure the accurate electrical potential, but also the servo motor would malfunction, resulting in the application of a strong impact on the pick up. The following precautionary measures should be strictly adhered to, in order to avoid such problems.

The reference voltage and GND should not be confused when using the minus probe of a measurement device. When an oscilloscope is being used special care should be taken to make sure that the reference voltage is not connected to the probe of ch1 (on the minus side), while the probe of ch2 (on the minus side), is connected to GND. Further, since the body frame of most measurement devices have the same electrical potential as the minus side of the probe, the body frame of the measurement device should be set to floating ground.

If the reference voltage is connected to GND by mistake, turn the regulator OFF immediately, or turn the power OFF.

- Remove the filters and wires used for measurements only after the regulator has been turned OFF.
- After the power supply is turned on, regulator ON the following adjustment and measurement are promptly done.
- Whenever the product is in the test mode, the software will not take any protective action. For this reason, special care should be taken to make sure that no mechanical or electrical shock could be applied to the product when taking measurements in the test mode.
- Whenever the EJECT key is pressed to eject the disk, no other keys, other than the EJECT key, should be pressed until the disk eject action has been completed.
- Press the EJECT key only after the disk has stopped completely.
- If the product hangs up turn the power OFF immediately.
- Laser didoes may be damaged, if the volume switch for the laser power adjustment of the pick up unit, is turned.

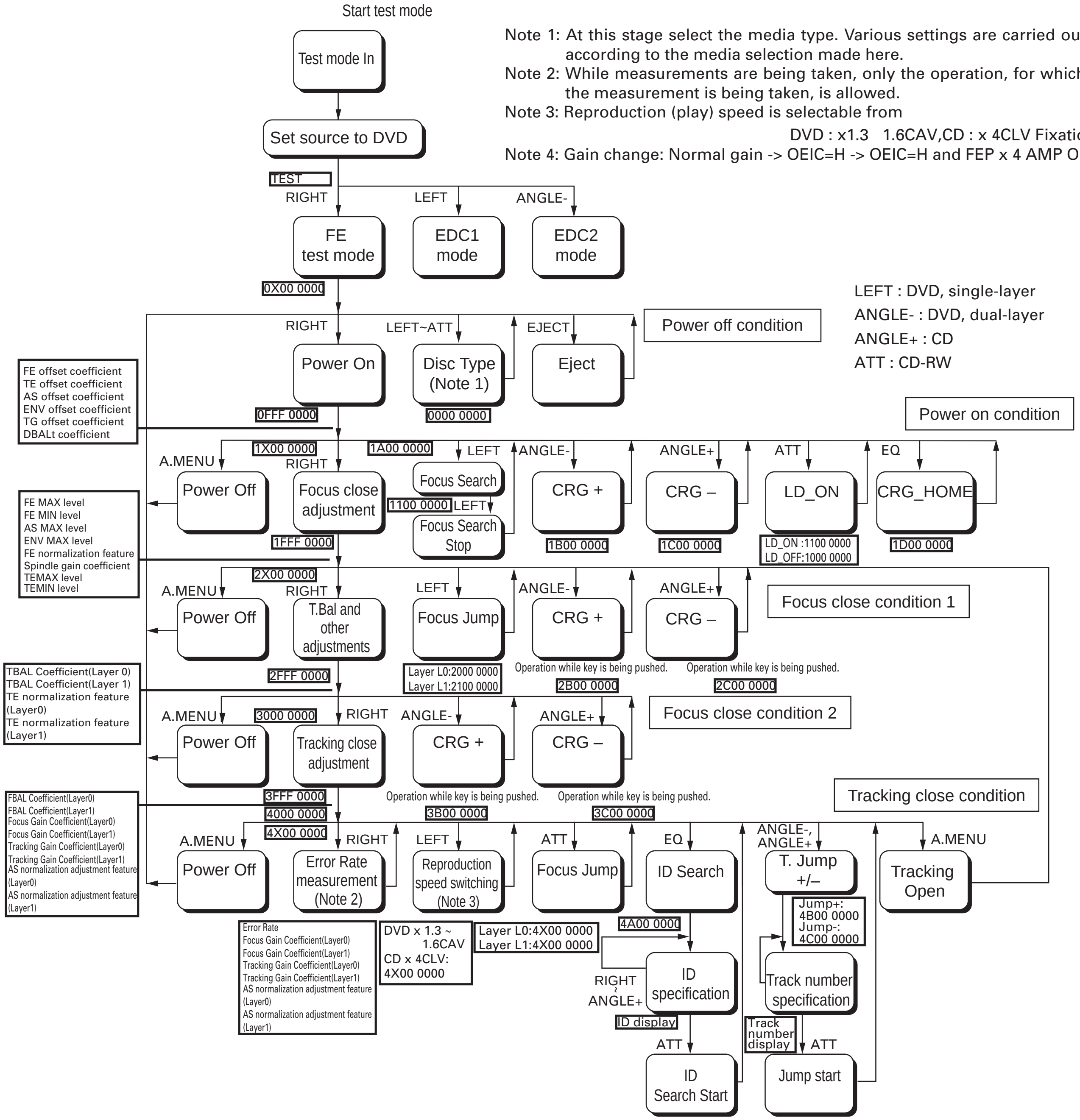
Attention)

- Test mode starting procedure
  Reset start while pressing the BAND and ANGLE- keys together.
- Test mode stopping procedure
  ACC and Backup OFF.

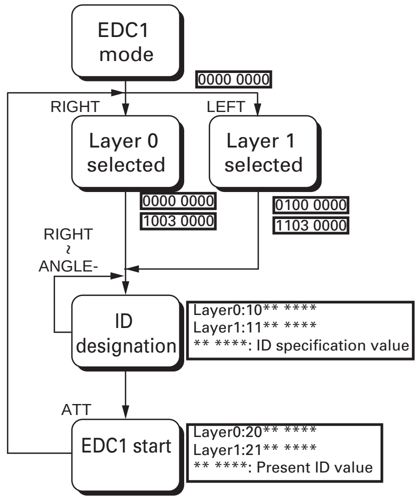
● Front-End test mode flow chart

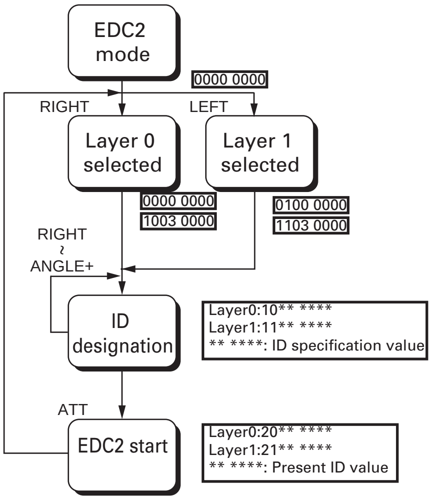
Note 1: At this stage select the media type. Various settings are carried out according to the media selection made here.
Note 2: While measurements are being taken, only the operation, for which the measurement is being taken, is allowed.
Note 3: Reproduction (play) speed is selectable from
DVD : x1.3 1.6CAV,CD : x 4CLV Fixation
Note 4: Gain change: Normal gain -> OEIC=H -> OEIC=H and FEP x 4 AMP ON

LEFT : DVD, single-layer
ANGLE- : DVD, dual-layer
ANGLE+ : CD
ATT : CD-RW



Start test mode
Test mode In
Set source to DVD
TEST
RIGHT
LEFT
ANGLE-
FE test mode
EDC1 mode
EDC2 mode
0X00 0000
RIGHT
LEFT~ATT
EJECT
Power On
Disc Type (Note 1)
Eject
Power off condition
0FFF 0000
0000 0000
Power on condition
FE offset coefficient
TE offset coefficient
AS offset coefficient
ENV offset coefficient
TG offset coefficient
DBALt coefficient
1X00 0000
1A00 0000
LEFT
ANGLE-
ANGLE+
ATT
EQ
A.MENU
RIGHT
Power Off
Focus close adjustment
Focus Search
1100 0000
LEFT
Focus Search Stop
CRG +
CRG –
LD_ON
CRG_HOME
1FFF 0000
1B00 0000
1C00 0000
LD_ON :1100 0000
LD_OFF:1000 0000
1D00 0000
FE MAX level
FE MIN level
AS MAX level
ENV MAX level
FE normalization feature
Spindle gain coefficient
TEMAX level
TEMIN level
2X00 0000
A.MENU
RIGHT
LEFT
ANGLE-
ANGLE+
Focus close condition 1
Power Off
T.Bal and other adjustments
Focus Jump
CRG +
CRG –
2FFF 0000
Layer L0:2000 0000
Layer L1:2100 0000
Operation while key is being pushed.
Operation while key is being pushed.
2B00 0000
2C00 0000
TBAL Coefficient(Layer 0)
TBAL Coefficient(Layer 1)
TE normalization feature (Layer0)
TE normalization feature (Layer1)
A.MENU
3000 0000
RIGHT
ANGLE-
ANGLE+
Focus close condition 2
Power Off
Tracking close adjustment
CRG +
CRG –
3FFF 0000
Operation while key is being pushed.
Operation while key is being pushed.
3B00 0000
3C00 0000
Tracking close condition
FBAL Coefficient(Layer0)
FBAL Coefficient(Layer1)
Focus Gain Coefficient(Layer0)
Focus Gain Coefficient(Layer1)
Tracking Gain Coefficient(Layer0)
Tracking Gain Coefficient(Layer1)
AS normalization adjustment feature (Layer0)
AS normalization adjustment feature (Layer1)
4000 0000
4X00 0000
A.MENU
RIGHT
LEFT
ATT
EQ
ANGLE-, ANGLE+
A.MENU
Power Off
Error Rate measurement (Note 2)
Reproduction speed switching (Note 3)
Focus Jump
ID Search
T. Jump +/–
Tracking Open
Error Rate
Focus Gain Coefficient(Layer0)
Focus Gain Coefficient(Layer1)
Tracking Gain Coefficient(Layer0)
Tracking Gain Coefficient(Layer1)
AS normalization adjustment feature (Layer0)
AS normalization adjustment feature (Layer1)
DVD x 1.3 ~ 1.6CAV
CD x 4CLV:
4X00 0000
Layer L0:4X00 0000
Layer L1:4X00 0000
4A00 0000
Jump+: 4B00 0000
Jump-: 4C00 0000
RIGHT ~ ANGLE+
ID specification
Track number specification
ID display
Track number display
ATT
ATT
ID Search Start
Jump start


EDC1 mode
0000 0000
RIGHT
LEFT
Layer 0 selected
Layer 1 selected
0000 0000
1003 0000
0100 0000
1103 0000
RIGHT ~ ANGLE-
ID designation
Layer0:10** ****
Layer1:11** ****
** ****: ID specification value
ATT
EDC1 start
Layer0:20** ****
Layer1:21** ****
** ****: Present ID value


EDC2 mode
0000 0000
RIGHT
LEFT
Layer 0 selected
Layer 1 selected
0000 0000
1003 0000
0100 0000
1103 0000
RIGHT ~ ANGLE+
ID designation
Layer0:10** ****
Layer1:11** ****
** ****: ID specification value
ATT
EDC2 start
Layer0:20** ****
Layer1:21** ****
** ****: Present ID value

F-close and F-search cannot be executed, unless LD-ON is set.
[If F-close isn't executed within 9 seconds after LD-ON, it switches to LD-OFF automatically.
And even if F-search is executed within 9 seconds after LD-ON, it also switches to LD-OFF.]
Please carry out F-close after carrying out power-off at once and carrying out power-on again, when carrying out F-close after performing F-search.

The track number designation is selected from the track numbers already prepared for selection.
Switching to cyclic operation is made at step ANGLE-, and the decision is finalized (entered) in step ATT.

For CD: Tracks 1, 4, 10, 11 and 32.

For DVD: Tracks 1, 4, 10, 11, 32, 64 and 100.

Method for designating an ID address:

- A number of digits are determined through commands RIGHT and LEFT. Numerical UP/DOWN operations are performed through commands ANGLE- and ANGLE+. The decision is finalized (entered) with command ATT.

Display

Error Code List

Error status from DVD microcomputer	Contents	Display
0X50	Mecha. error	No display
0X40	No disc	No display
0X30	The temperature is abnormal	Thermal Protection in Motion
0X20	Read error	Error-02-XX
0XE2	Non-playable disc	NON-PLAYABLE DISC
0X90	Different region disc	DIFFERENT REGION DISC
0XFF	Undefined error	Error-FF

Error code of read error(Part of XX)

Error Code	Contents	Display
0X99	Data cannot read	Please confirm the disc
0X80	The address cannot be found	Please confirm the disc
0X90	Focus error	Please confirm the disc
0X91	Spindle lock NG	DVD is stopping because mechanism detected abnormality
0X92	Carriage home NG	DVD is stopping because mechanism detected abnormality
0X93	FOK error	Please confirm the disc
0X94	ID/Subcode cannot be read	Please confirm the disc
0X95	High spindle rotation	DVD is stopping because mechanism detected abnormality
0X96	Row spindle rotation	DVD is stopping because mechanism detected abnormality
0X98	TOC cannot be found	Please confirm the disc
0X9A	AV chip error	DVD is stopping because mechanism detected abnormality
0X9B	RecaveryNG(BE)	DVD is stopping because mechanism detected abnormality
0X9C	Play state error	
0X9D	Disc data error	
0X9E	Serface error (Disc distinction is improper)	

Skew Adjustment

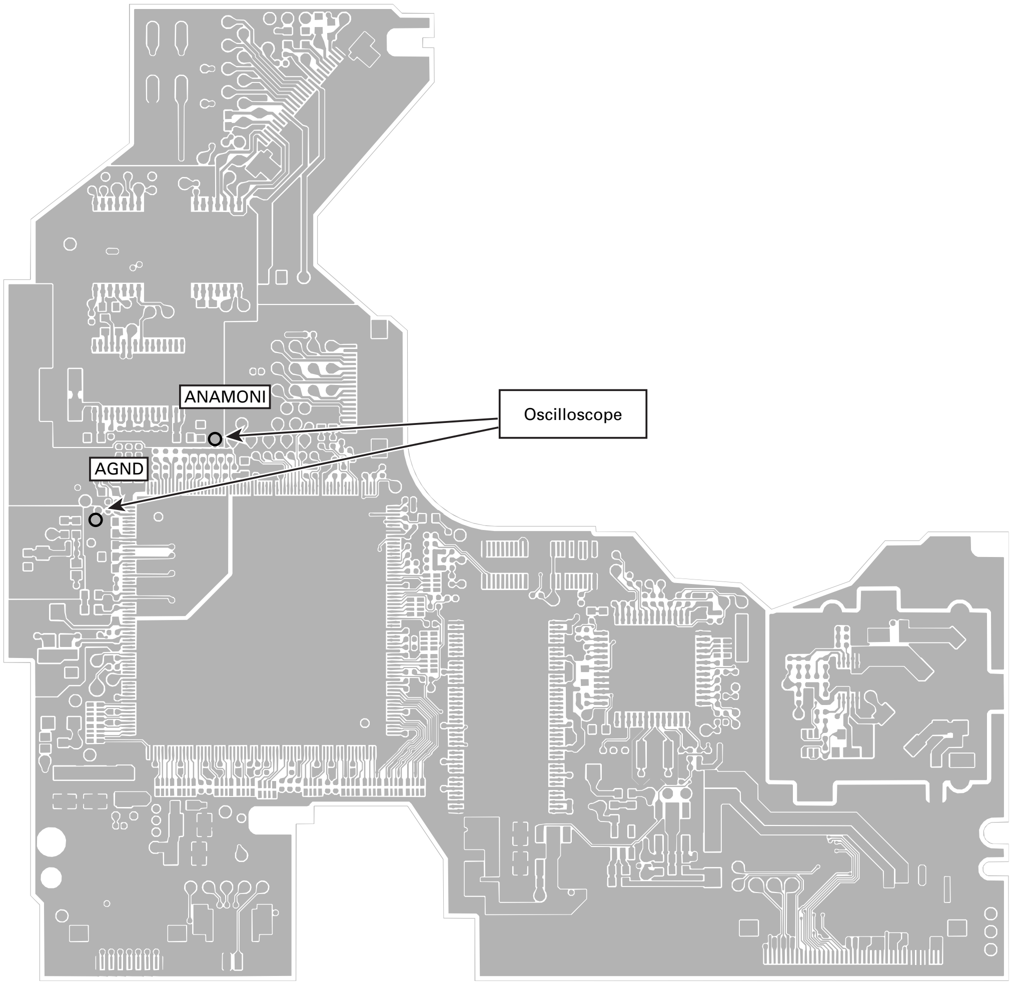
The skew adjustment is to adjust the pickup and the flatness of the disc so that the beam from the pickup continues to go to the disc vertically. In MS3 mecha, the pickup shaft on the inner track near the carriage motor is fixed, so the fixed position is regarded as the standard and the flatness is adjusted. Observing the RF waveform on the oscilloscope, repeat the adjustment on the inner track position and the outer track position, and narrow the adjusted value.

If any of the following replacements have been performed on the system, adjustments for pick up, must be conducted:

1. Pick up unit replacement
2. Spindle motor replacement
3. Carriage chassis replacement
4. Pick up unit main shaft replacement
5. Pick up unit sub-shaft replacement

Measurement device and tools	: Oscilloscope Allen key wrench 40-pin flexible extension (GGD1284) 2-pin extension cable(GGD1439) Screw lock (GYL1001)
Disk used	
Measurement reference	: GGV1018
Measurement point	: AGND3
Connection diagram	: ANAMONI

DVD core unit



A B C D E F

Symptoms in case of poor adjustment: Error efficiency deteriorated: 10^{-3} (Optimum value: 10^{-4} or lower)
High jitter of the RF signal RF waveform deformed
Unstable operation in tracking closing and servo control

Caution: Avoid exposing your eyes to laser beams for a long time.

Preparation for adjustment: Clean both ends of the shafts.
Use brand new skew screws supplied with the service kit GXX1242.

Procedures:

1. Place the DVD mechanism module upside down.
   To avoid the disc from being robbed when it is turned upside down, first put a coin of about 1.5 mm on the table, then turn the disc upside down and set it so that the ① in the figure comes to the point immediately above the coin.
2. After replacing the pickup (by referring to the procedures of "Removing the Pickup."), roughly adjust the three skew screws through visual check so that the pickup is mounted in parallel to the CRG chassis around the inner and outer tacks.
3. Connect an oscilloscope as shown in the connecting diagram.
4. Turn on the power of the product. Load the test disc (GGV1018).
5. In the front-end test mode, set the disc type to DVD layer 1. Then, turn on the power. Move the pickup toward the inner tracks.
6. Turn on the laser diodes.
7. With the focus servo closed, complete all automatic adjustments. Close the tracking servo, and then complete all automatic adjustments.

8 Follow the next procedures, from 8-1 to 8-5, and adjust the (three) skew screws.

8-1 Move the pickup toward the inner track and turn the skew adjustment screw C so that the RF level of oscilloscope becomes the maximum.
(Tangential adjustment at the inner track position: Adjust the flatness of the disc at the inner track position with the adjustment screw C)

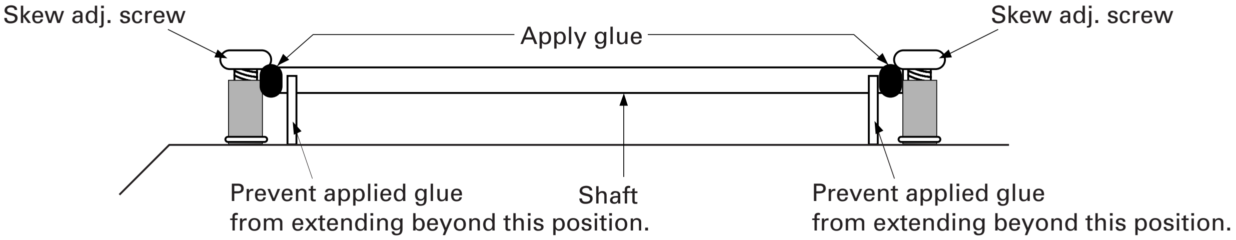
8-2 Move the pickup toward the outer track and turn the skew adjustment screw B so that the RF level becomes the maximum.
(Tangential adjustment at the outer track position: Adjust the flatness of the disc at the outer track position with the adjustment screw B)

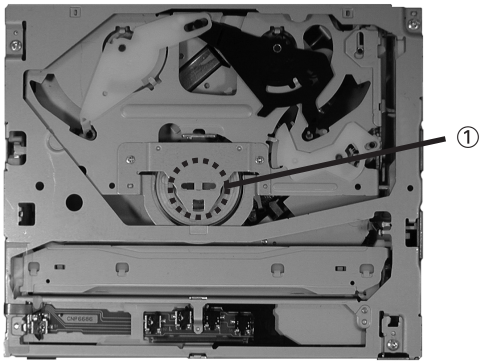
8-3 Leave the pickup at the outer track position and turn the skew adjustment screws A and B in the same direction alternately one quarter at a time (A•B•A•B •••) so that the RF level becomes the maximum.
(Radial adjustment at the outer track position: Keeping the flatness at the outer track position, adjust the flatness of the whole disk with the adjustment screws A and B)

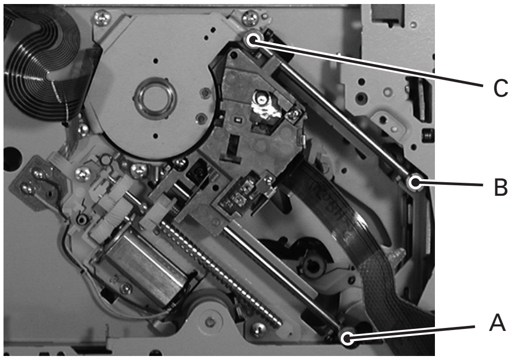
8-4 Move the pickup toward the inner track and turn the skew adjustment screw C so that the RF level becomes the maximum.
(Tangential adjustment at the inner track position: Adjust the flatness of the disc at the inner track position with the djustment screw C)

8-5 Repeat the steps from 8-2 to 8-4 three times, and adjust at the position where the RF level becomes the maximum.

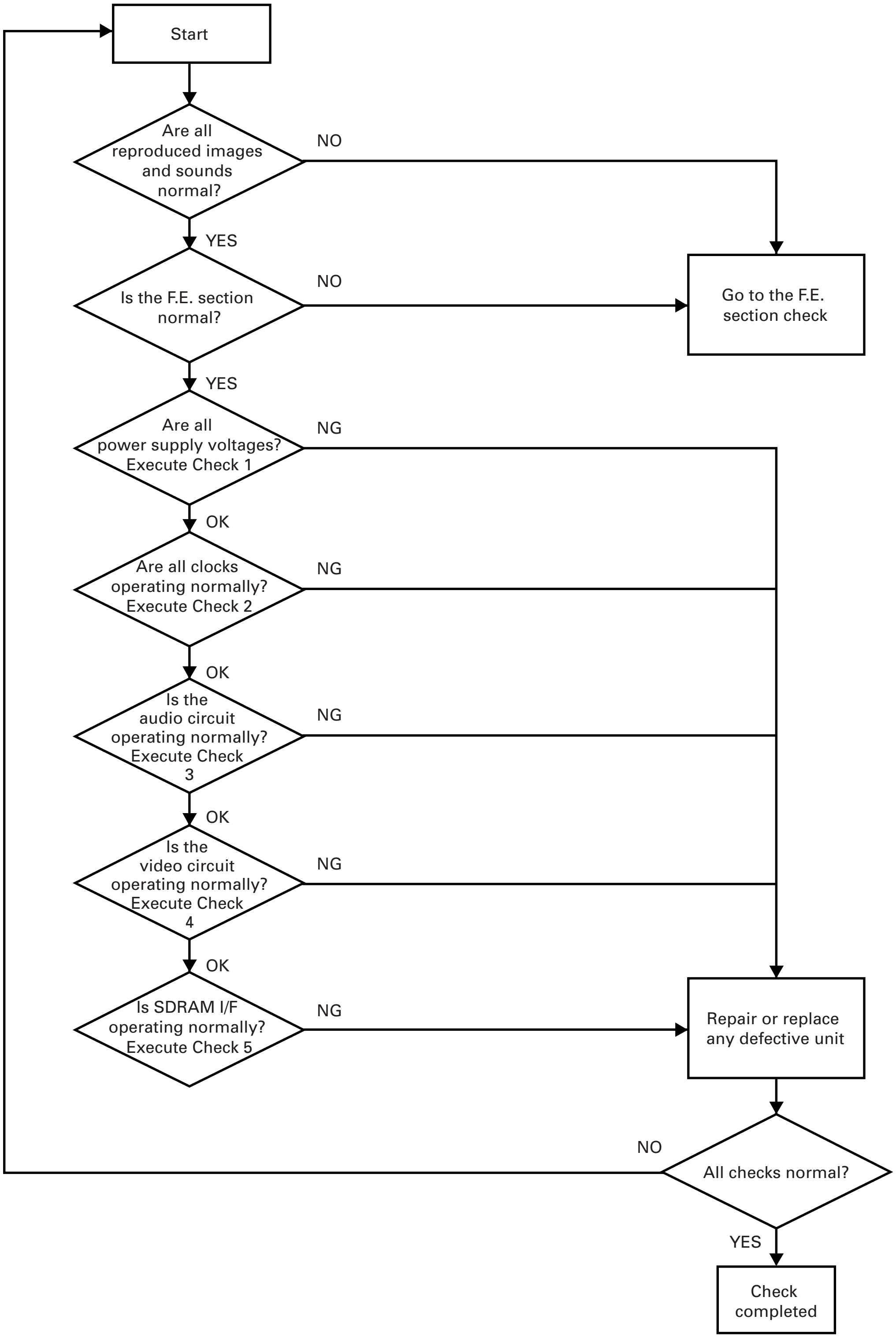
9. Turn off the power in the test mode. After confirming that the disc has stopped, eject the disc.
10. Adjust with a screw rock the shaft and skew adjustment screw to the same state as initial one.


Skew adj. screw
Apply glue
Skew adj. screw
Prevent applied glue from extending beyond this position.
Shaft
Prevent applied glue from extending beyond this position.





Back end section check flow chart


Start
Are all reproduced images and sounds normal?
NO
YES
Is the F.E. section normal?
NO
Go to the F.E. section check
YES
Are all power supply voltages? Execute Check 1
NG
OK
Are all clocks operating normally? Execute Check 2
NG
OK
Is the audio circuit operating normally? Execute Check 3
NG
OK
Is the video circuit operating normally? Execute Check 4
NG
OK
Is SDRAM I/F operating normally? Execute Check 5
NG
Repair or replace any defective unit
NO
All checks normal?
YES
Check completed

Check 1 : Are all power supply voltages?

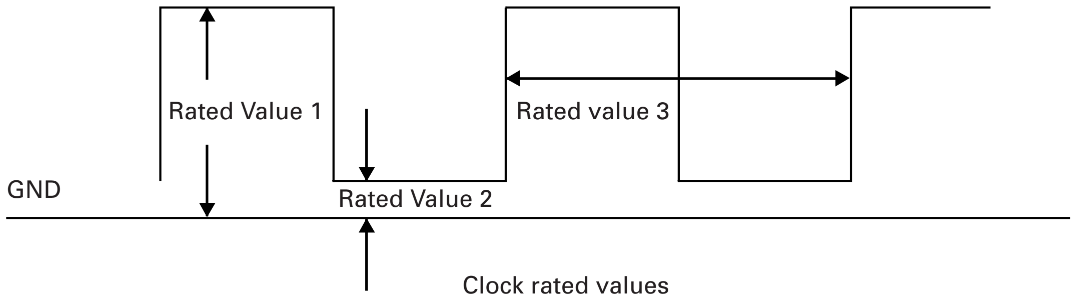
Reproduce DVD-REF-A1 Title 1.
Verify the voltage of the sensing pin.

No.	Verification location	Rated value	Unit
1	VD8_1/2 - PGND_1/2	8.0 ± 0.4	V
2	VDD33 - DGND1/2/3	3.3 ± 0.15	V
3	SRVDD - DGND1/2/3	3.3 ± 0.15	V
4	VCC5_1 - AGND1	5.0 ± 0.1	V
5	AVCC5_1 - AGND1	5.0 ± 0.1	V
6	VCC33_1/2 - DGND1/2/3	3.3 ± 0.15	V
7	VCC33_3/4/5 - DGND1/2/3	3.3 ± 0.3	V
8	VCC15_1/2 - DGND1/2/3	1.5 ± 0.1	V

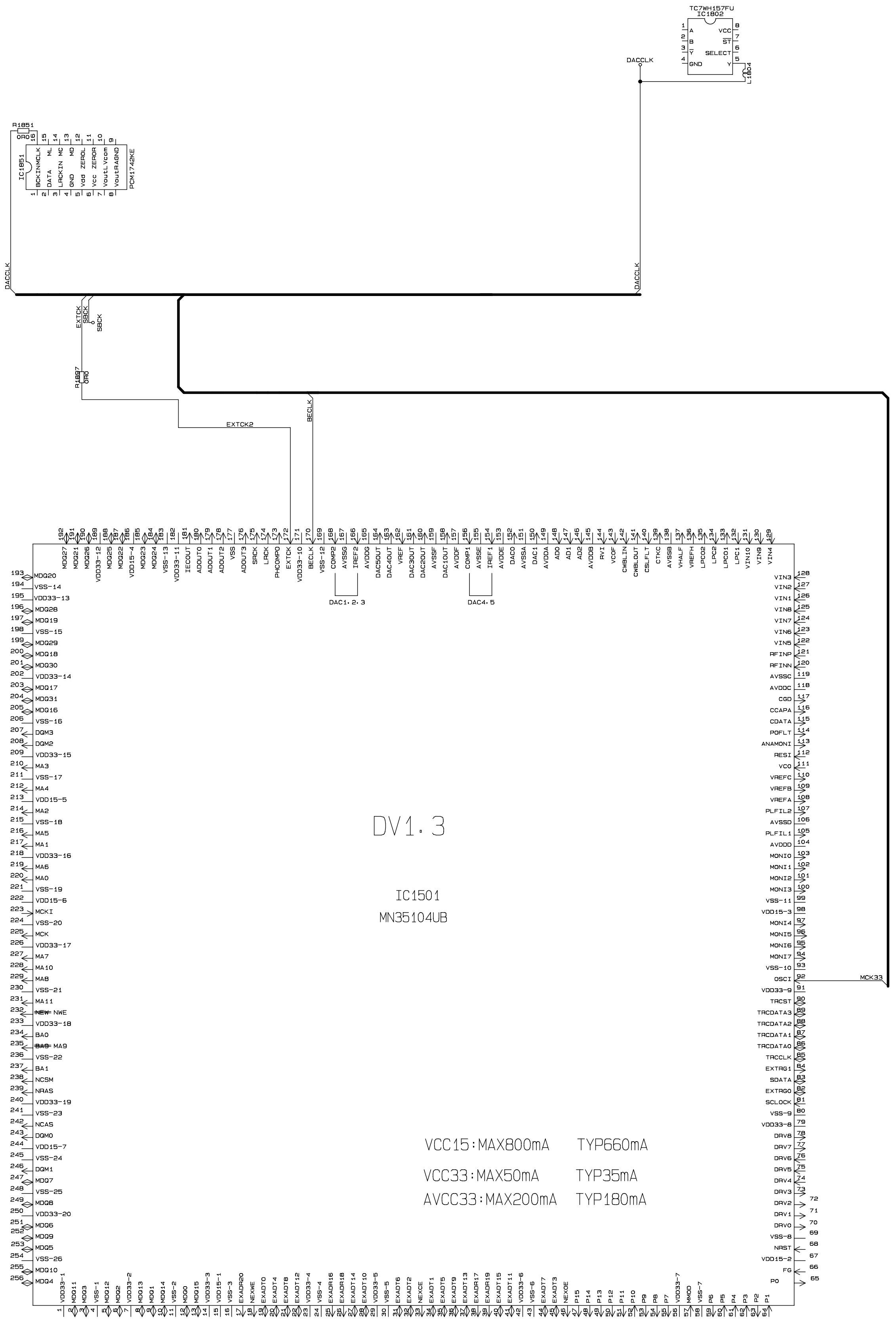
Check 2 : Are all clock operating normally?

Reproduce DVD-REF-A1 Title 1
Check Circuit Diagram ①.
Checks are to conducted with a GND reference.
If locations listed under "verification location 2", can be verified, there will be no need to perform verifications for the locations listed under "verification location 1."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder and other defects in the applicable line, vicinity of IC 1802 (Circuit Diagram ①) and peripheral components.

No.	Verification location 1 (Sensing pin)	Verification location 2	Media	Rated value 1	Rated value 2	Rated value 3
1	BECLK	IC1501 170pin	ALL	2.3V ～ VCC33	GND ～ 0.8V	27MHz ± 50ppm
2	EXTCK	IC1501 172pin	DVD	2.3V ～ VCC33	GND ～ 0.8V	36.8640MHz ± 300ppm
3	EXTCK	IC1501 172pin	CD	2.3V ～ VCC33	GND ～ 0.8V	33.8688MHz ± 300ppm
4	MCK33	IC1501 92pin	ALL	2.2V ～ VCC33	GND ～ 0.8V	33.898MHz ± 300ppm
5	DACCLK	IC1851 16pin	DVD	2.0V ～ VCC33	GND ～ 0.8V	33.8688MHz ± 300ppm
6	DACCLK	IC1881 3pin	DVD	2.3V ～ VCC33	GND ～ 0.99V	33.8689MHz ± 300ppm



Clock rated values

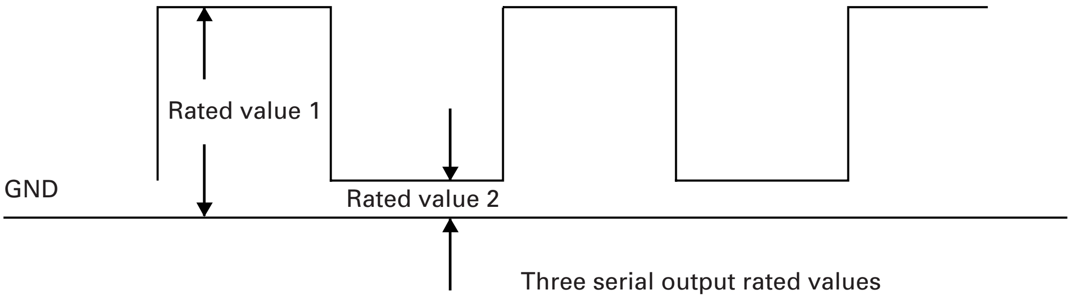

TC7WH157FU
IC1802
A
B
Y
GND
VCC
ST
SELECT
Y
L1804
DACCLK
R1851
0R0
IC1851
BCKIN
DATA
LRCKIN
GND
Vdd
Vcc
VoutL
VoutR
MCLK
ML
MC
MD
ZEROL
ZEROR
Vcom
AGND
PCM1742KE
DACCLK
EXTCK
SBCK
SBCK
R1807
0R0
EXTCK2
BECLK
DAC1,2,3
DAC4,5
MCK33
DV1.3
IC1501
MN35104UB
VCC15:MAX800mA TYP660mA
VCC33:MAX50mA TYP35mA
AVCC33:MAX200mA TYP180mA

Circuit Diagram ①

Check 3 : Is the audio circuit operating normally?

Reproduce DVD-REF-A1 Title 2 Chapter (48k/16-bit 1 kHz/0dB).
Checks are to be conducted using GNDAU1 (sensing pins) as a reference.
If the locations, listed under "verification location 2", can be verified, there is no need to conduct verifications for the locations listed under "verification location 1."
If the result is not satisfactory, check to see if there are any problems with resin flux cored solder and other defects in the applicable line, vicinity of major parts stated in the above diagram (Circuit Diagram②) and peripheral components.

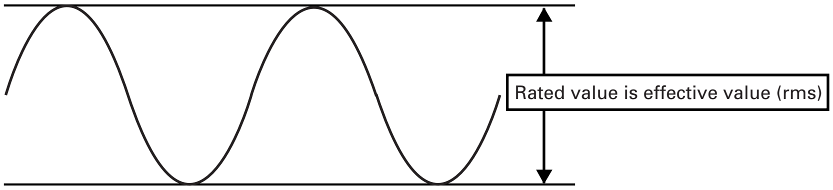
No.	Verification location 1 (Sensing pin)	Verification location 2	Rated value 1	Rated value 2	Reference waveform
1	AOUT0	IC1851 2pin	2.0V and over	0.8V and lower	Waveform 1
2	SRCK	IC1851 1pin	2.0V and over	0.8V and lower	Waveform 1
3	LRCK	IC1851 3pin	2.0V and over	0.8V and lower	Waveform 1



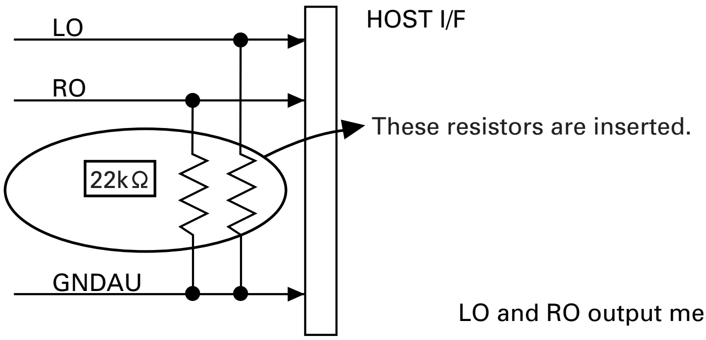
Three serial output rated values

Checks are conducted with the measurement circuit below.

No.	Verification location 1 (Sensing pin)	Verification location 2	Rated value (rms)	Reference waveform
4	LO	CN1901 37pin	1100±150mV	Waveform 2
5	RO	CN1901 35pin	1100±150mV	Waveform 2

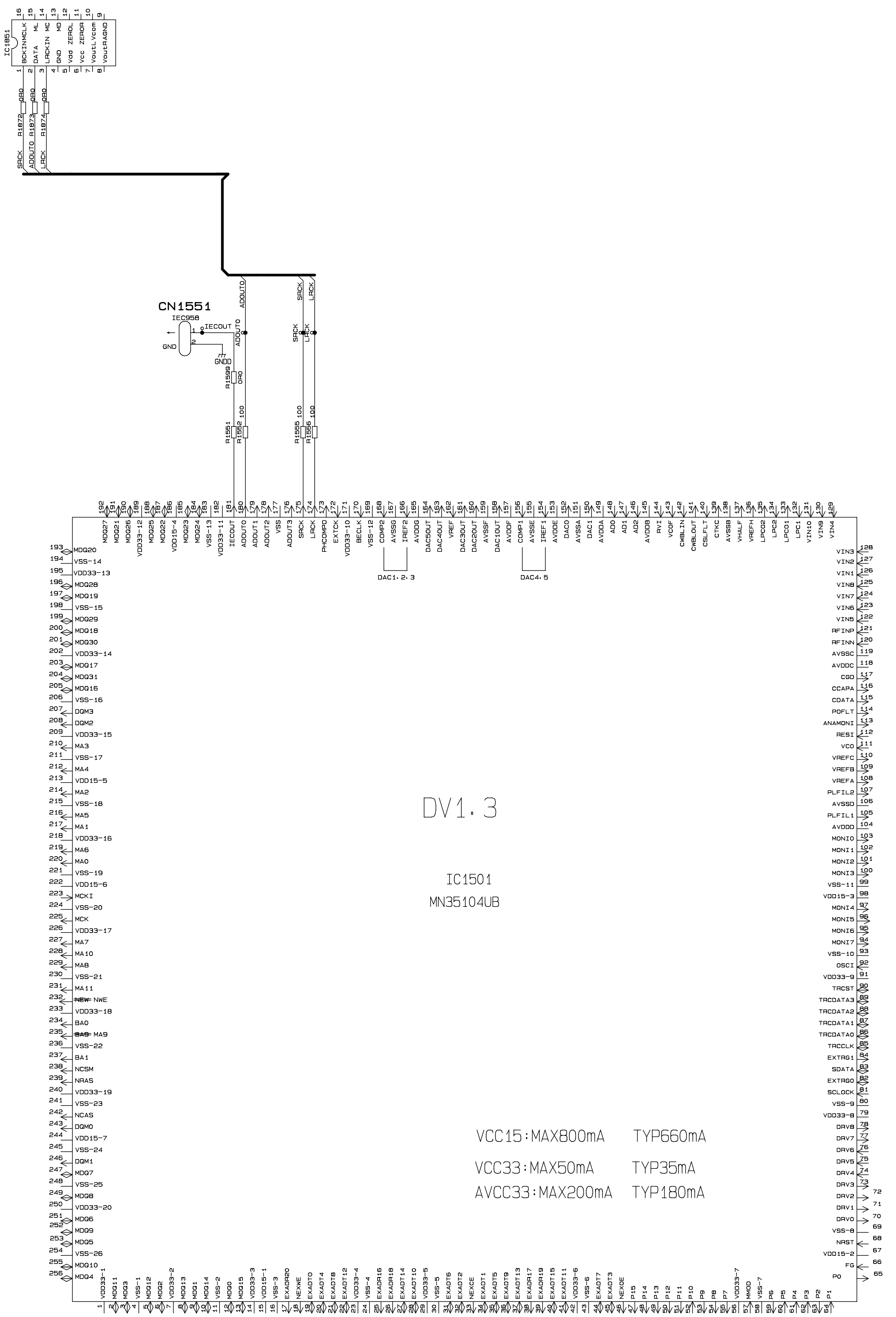


Analog audio outputs (LO and RO) rated values



LO and RO output measurement circuit

No.	Verification location 1 (Sensing pin)	Verification location 2	Rated value 1	Rated value 2	Reference waveform
6	IEC958	CN1551 1pin	VCC33V−0.6V and over	0.4Vand lower	Waveform 3


IC1851
1 BCKIN
2 DATA
3 LRCKIN
4 GND
5 Vdd
6 Vcc
7 VoutL
8 VoutRAGND
16 XMCLK
15 ML
14 MC
13 MD
12 ZEROL
11 ZEROR
10 Vcom
9
R1872 0R0
R1873 0R0
R1874 0R0
SRCK
ADOUT0
LRCK
CN1551
IEC958
GND
1
2
IECOUT
GNDD
R1590 0R0
R1551 100
R1552 100
R1555 100
R1556 100
ADOUT0
SRCK
LRCK
DAC1・2・3
DAC4・5
DV1・3
IC1501
MN35104UB
VCC15:MAX800mA TYP660mA
VCC33:MAX50mA TYP35mA
AVCC33:MAX200mA TYP180mA
192 MDQ27
191 MDQ21
190 MDQ26
189 VDD33-12
188 MDQ25
187 MDQ22
186 VDD15-4
185 MDQ23
184 MDQ24
183 VSS-13
182 VDD33-11
181 IECOUT
180 ADOUT0
179 ADOUT1
178 ADOUT2
177 VSS
176 ADOUT3
175 SRCK
174 LRCK
173 PHCOMPO
172 EXTCK
171 VDD33-10
170 BECLK
169 VSS-12
168 COMP2
167 AVSSG
166 IREF2
165 AVDDG
164 DAC5OUT
163 DAC4OUT
162 VREF
161 DAC3OUT
160 DAC2OUT
159 AVSSF
158 DAC1OUT
157 AVDDF
156 COMP1
155 AVSSE
154 IREF1
153 AVDDE
152 DAC0
151 AVSSA
150 DAC1
149 AVDDA
148 AD0
147 AD1
146 AD2
145 AVDDB
144 RVI
143 VCOF
142 CWBLIN
141 CWBLOUT
140 CSLFLT
139 CTKC
138 AVSSB
137 VHALF
136 VREFH
135 LPCO2
134 LPC2
133 LPCO1
132 LPC1
131 VIN10
130 VIN9
129 VIN4
128 VIN3
127 VIN2
126 VIN1
125 VIN8
124 VIN7
123 VIN6
122 VIN5
121 RFINP
120 RFINN
119 AVSSC
118 AVDDC
117 CGD
116 CCAPA
115 CDATA
114 POFLT
113 ANAMONI
112 RESI
111 VCO
110 VREFC
109 VREFB
108 VREFA
107 PLFIL2
106 AVSSD
105 PLFIL1
104 AVDDD
103 MONI0
102 MONI1
101 MONI2
100 MONI3
99 VSS-11
98 VDD15-3
97 MONI4
96 MONI5
95 MONI6
94 MONI7
93 VSS-10
92 OSCI
91 VDD33-9
90 TRCST
89 TRCDATA3
88 TRCDATA2
87 TRCDATA1
86 TRCDATA0
85 TRCCLK
84 EXTRG1
83 SDATA
82 EXTRG0
81 SCLOCK
80 VSS-9
79 VDD33-8
78 DRV8
77 DRV7
76 DRV6
75 DRV5
74 DRV4
73 DRV3
72 DRV2
71 DRV1
70 DRV0
69 VSS-8
68 NRST
67 VDD15-2
66 FG
65 P0
1 VDD33-1
2 MDQ11
3 MDQ3
4 VSS-1
5 MDQ12
6 MDQ2
7 VDD33-2
8 MDQ13
9 MDQ1
10 MDQ14
11 VSS-2
12 MDQ0
13 MDQ15
14 VDD33-3
15 VDD15-1
16 VSS-3
17 EXADR20
18 NEXWE
19 EXADT0
20 EXADT4
21 EXADT8
22 EXADT12
23 VDD33-4
24 VSS-4
25 EXADR16
26 EXADR18
27 EXADT14
28 EXADT10
29 VDD33-5
30 VSS-5
31 EXADT6
32 EXADT2
33 NEXCE
34 EXADT1
35 EXADT5
36 EXADT9
37 EXADT13
38 EXADR17
39 EXADR19
40 EXADT15
41 EXADT11
42 VDD33-6
43 VSS-6
44 EXADT7
45 EXADT3
46 NEXOE
47 P15
48 P14
49 P13
50 P12
51 P11
52 P10
53 P9
54 P8
55 P7
56 VDD33-7
57 MMOD
58 VSS-7
59 P6
60 P5
61 P4
62 P3
63 P2
64 P1
193 MDQ20
194 VSS-14
195 VDD33-13
196 MDQ28
197 MDQ19
198 VSS-15
199 MDQ29
200 MDQ18
201 MDQ30
202 VDD33-14
203 MDQ17
204 MDQ31
205 MDQ16
206 VSS-16
207 DQM3
208 DQM2
209 VDD33-15
210 MA3
211 VSS-17
212 MA4
213 VDD15-5
214 MA2
215 VSS-18
216 MA5
217 MA1
218 VDD33-16
219 MA6
220 MA0
221 VSS-19
222 VDD15-6
223 MCKI
224 VSS-20
225 MCK
226 VDD33-17
227 MA7
228 MA10
229 MA8
230 VSS-21
231 MA11
232 ~~NEW~~ NWE
233 VDD33-18
234 BA0
235 ~~BA9~~ MA9
236 VSS-22
237 BA1
238 NCSM
239 NRAS
240 VDD33-19
241 VSS-23
242 NCAS
243 DQM0
244 VDD15-7
245 VSS-24
246 DQM1
247 MDQ7
248 VSS-25
249 MDQ8
250 VDD33-20
251 MDQ6
252 MDQ9
253 MDQ5
254 VSS-26
255 MDQ10
256 MDQ4

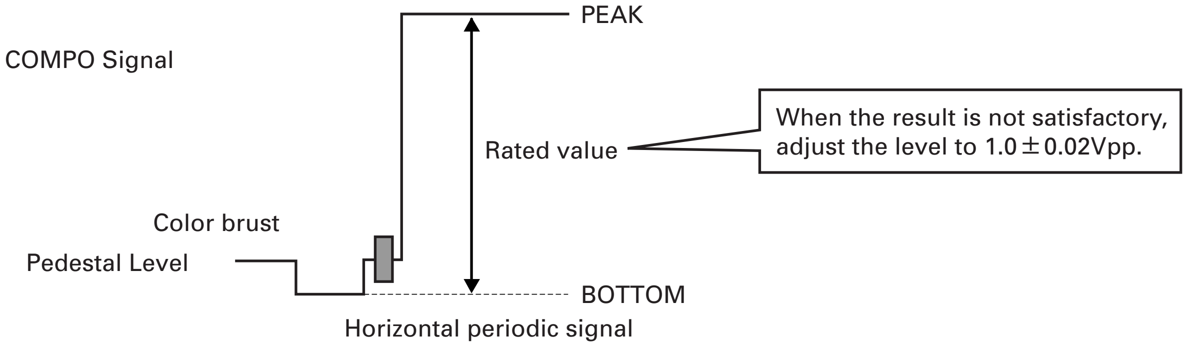
Circuit Diagram ②

Check 4 : Is the video circuit operated normally?

Reproduce DVD-REF-A1 Title 2 Chapters (White 1000IRE)
Monitor the output with the oscilloscope, by setting the COMPO signal to a GND reference.
Set the Trigger mode to the TV trigger, and the Trigger line to line-150.

No.	Verification location 1 (Sensing pin)	Rated value	Reference waveform
1	COMPO	1.0±0.02Vpp	Waveform 4

If the result is not satisfactory, check to see if there are any problems with resin flux cored solder and other defects in the applicable line, vicinity of major parts stated in the above diagram (Circuit Diagram③) and peripheral components.



When the result is not satisfactory, adjust the level to 1.0±0.02Vpp.

Composite signal white 100% output waveform

< Method of Readjusting Video Levels >

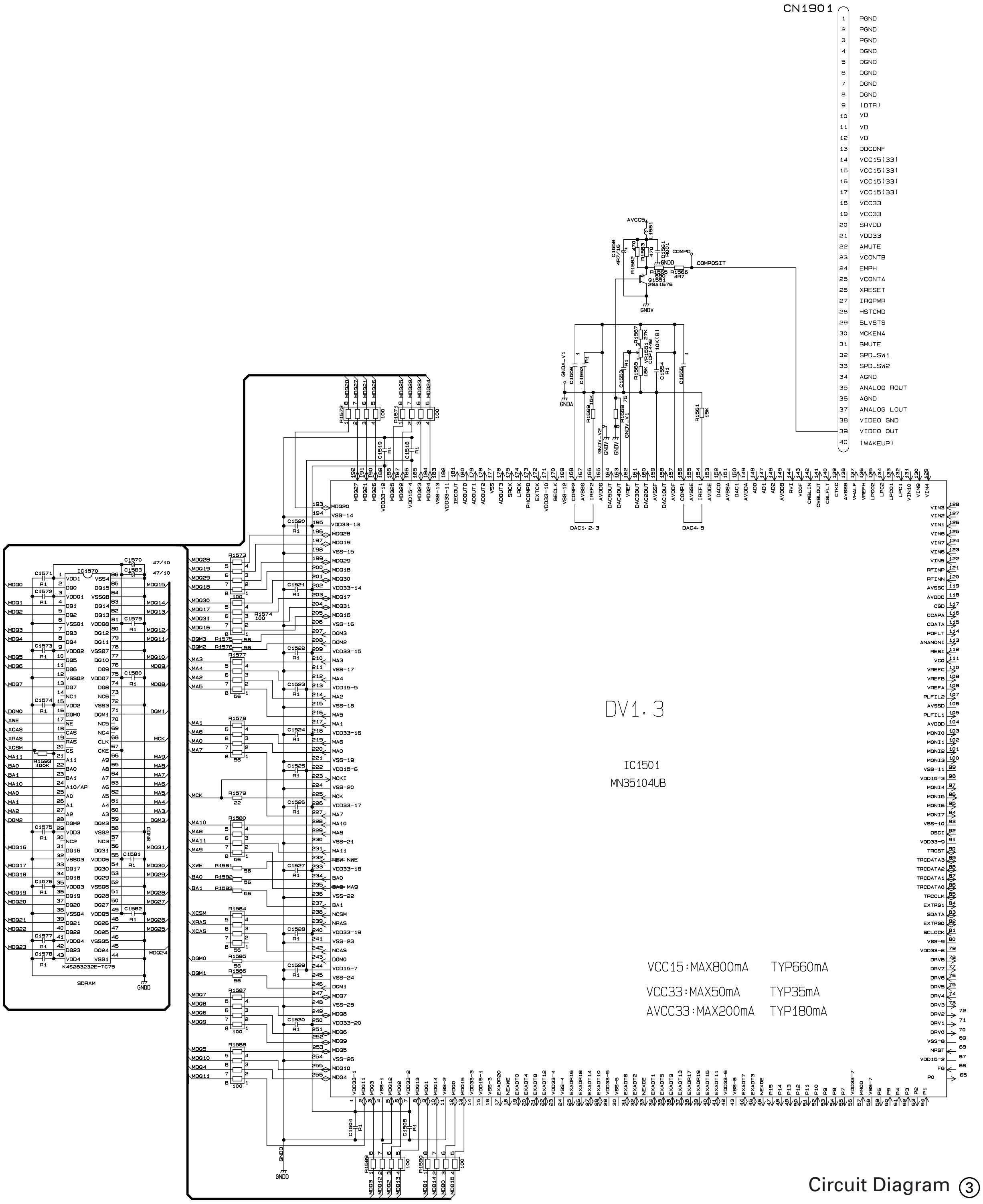
If the video composite output is not within the range of rated value, the video level is readjusted in the following method.
Turn the video level adjustment volume (VR1551) to adjust its level to 1.0 ± 0.02Vpp.

Check 5 : Is SDRAM I/F operated normally?

Reproduce DVD-REF-A1 Title 1.
Check Circuit Diagram③
Common to all DVD-V adapted modules
Check the conductivity of both the "Verification location 1"and the "Verification location 2."
If the result is not satisfactory, check to see if there are any problems with the resin flux cored solder, parts and components, in areas where as problem occurs, for the overall sequence of "output" "input" of the checked location.

No.	Signal name	Verification location 1	Verification location 2	Rated value
1	MA0	IC1570 25pin	IC1501 220pin	56Ω±5%
2	MA1	IC1570 26pin	IC1501 217pin	56Ω±5%
3	MA2	IC1570 27pin	IC1501 214pin	56Ω±5%
4	MA3	IC1570 60pin	IC1501 210pin	56Ω±5%
5	MA4	IC1570 61pin	IC1501 212pin	56Ω±5%
6	MA5	IC1570 62pin	IC1501 216pin	56Ω±5%
7	MA6	IC1570 63pin	IC1501 219pin	56Ω±5%
8	MA7	IC1570 64pin	IC1501 227pin	56Ω±5%
9	MA8	IC1570 65pin	IC1501 229pin	56Ω±5%
10	MA9	IC1570 66pin	IC1501 235pin	56Ω±5%
11	MA10	IC1570 24pin	IC1501 228pin	56Ω±5%
12	MA11	IC1570 21pin	IC1501 231pin	56Ω±5%

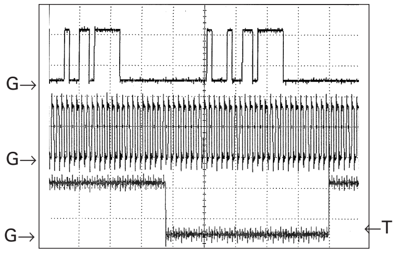
No.	Signal name	Verification location 1	Verification location 2	Rated value
13	MDQ0	IC1570 2pin	IC1501 12pin	100Ω± 5%
14	MDQ1	IC1570 4pin	IC1501 9pin	100Ω± 5%
15	MDQ2	IC1570 5pin	IC1501 6pin	100Ω± 5%
16	MDQ3	IC1570 7pin	IC1501 3pin	100Ω± 5%
17	MDQ4	IC1570 8pin	IC1501 256pin	100Ω± 5%
18	MDQ5	IC1570 10pin	IC1501 253pin	100Ω± 5%
19	MDQ6	IC1570 11pin	IC1501 251pin	100Ω± 5%
20	MDQ7	IC1570 13pin	IC1501 247pin	100Ω± 5%
21	MDQ8	IC1570 74pin	IC1501 249pin	100Ω± 5%
22	MDQ9	IC1570 76pin	IC1501 252pin	100Ω± 5%
23	MDQ10	IC1570 77pin	IC1501 255pin	100Ω± 5%
24	MDQ11	IC1570 79pin	IC1501 2pin	100Ω± 5%
25	MDQ12	IC1570 80pin	IC1501 5pin	100Ω± 5%
26	MDQ13	IC1570 82pin	IC1501 8pin	100Ω± 5%
27	MDQ14	IC1570 83pin	IC1501 10pin	100Ω± 5%
28	MDQ15	IC1570 85pin	IC1501 13pin	100Ω± 5%
29	MDQ16	IC1570 31pin	IC1501 205pin	100Ω± 5%
30	MDQ17	IC1570 33pin	IC1501 203pin	100Ω± 5%
31	MDQ18	IC1570 34pin	IC1501 200pin	100Ω± 5%
32	MDQ19	IC1570 36pin	IC1501 197pin	100Ω± 5%
33	MDQ20	IC1570 37pin	IC1501 193pin	100Ω± 5%
34	MDQ21	IC1570 39pin	IC1501 191pin	100Ω± 5%
35	MDQ22	IC1570 40pin	IC1501 187pin	100Ω± 5%
36	MDQ23	IC1570 42pin	IC1501 185pin	100Ω± 5%
37	MDQ24	IC1570 45pin	IC1501 184pin	100Ω± 5%
38	MDQ25	IC1570 47pin	IC1501 188pin	100Ω± 5%
39	MDQ26	IC1570 48pin	IC1501 190pin	100Ω± 5%
40	MDQ27	IC1570 50pin	IC1501 192pin	100Ω± 5%
41	MDQ28	IC1570 51pin	IC1501 196pin	100Ω± 5%
42	MDQ29	IC1570 53pin	IC1501 199pin	100Ω± 5%
43	MDQ30	IC1570 54pin	IC1501 201pin	100Ω± 5%
44	MDQ31	IC1570 56pin	IC1501 204pin	56 Ω±5%
45	MCK	IC1570 68pin	IC1501 225pin	22 Ω±5%
46	XWE	IC1570 17pin	IC1501 232pin	56 Ω±5%
47	XCAS	IC1570 18pin	IC1501 242pin	56 Ω±5%
48	XRAS	IC1570 19pin	IC1501 239pin	56 Ω±5%
49	XCSM	IC1570 20pin	IC1501 238pin	56 Ω±5%
50	DQM0	IC1570 16pin	IC1501 243pin	56 Ω±5%
51	DQM1	IC1570 71pin	IC1501 246pin	56 Ω±5%
52	DQM2	IC1570 28pin	IC1501 208pin	56 Ω±5%
53	DQM3	IC1570 59pin	IC1501 207pin	56 Ω±5%
54	BA0	IC1570 22pin	IC1501 234pin	56 Ω±5%
55	BA1	IC1570 23pin	IC1501 237pin	56 Ω±5%


CN1901
1 PGND
2 PGND
3 PGND
4 DGND
5 DGND
6 DGND
7 DGND
8 DGND
9 (DTR)
10 VD
11 VD
12 VD
13 DDCONF
14 VCC15(33)
15 VCC15(33)
16 VCC15(33)
17 VCC15(33)
18 VCC33
19 VCC33
20 SRVDD
21 VDD33
22 AMUTE
23 VCONTB
24 EMPH
25 VCONTA
26 XRESET
27 IRQPWR
28 HSTCMD
29 SLVSTS
30 MCKENA
31 BMUTE
32 SPD_SW1
33 SPD_SW2
34 AGND
35 ANALOG ROUT
36 AGND
37 ANALOG LOUT
38 VIDEO GND
39 VIDEO OUT
40 (WAKEUP)
AVCC5
COMPO
COMPOSIT
Q1551
2SA1576
GNDV
GNDA
DAC1・2・3
DAC4・5
DV1.3
IC1501
MN35104UB
VCC15:MAX800mA TYP660mA
VCC33:MAX50mA TYP35mA
AVCC33:MAX200mA TYP180mA
IC1570
K4S283232E-TC75
SDRAM
GNDD

Circuit Diagram ③

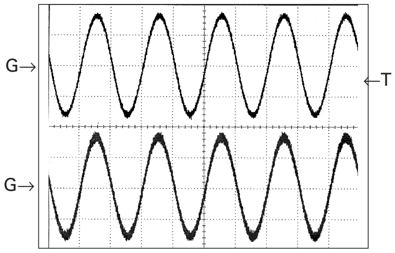
Note: Reference voltage VHALF : 1.65V

CH1: AOUT0
CH2: SRCKAV
CH3: LRCKAV
2V/div. 2µs/div.



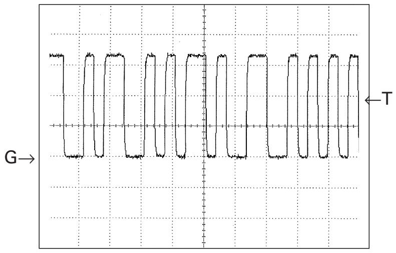
Waveform1

CH1: LO
CH2: RO
1V/div. 500µs/div.



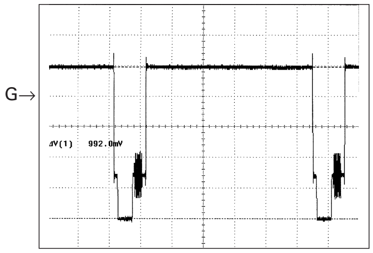
Waveform2

CH1: IEC958 1V/div. 500ns/div.



Waveform3

CH1: COMPO 200mV/div. 10µs/div.
[White 100% output]

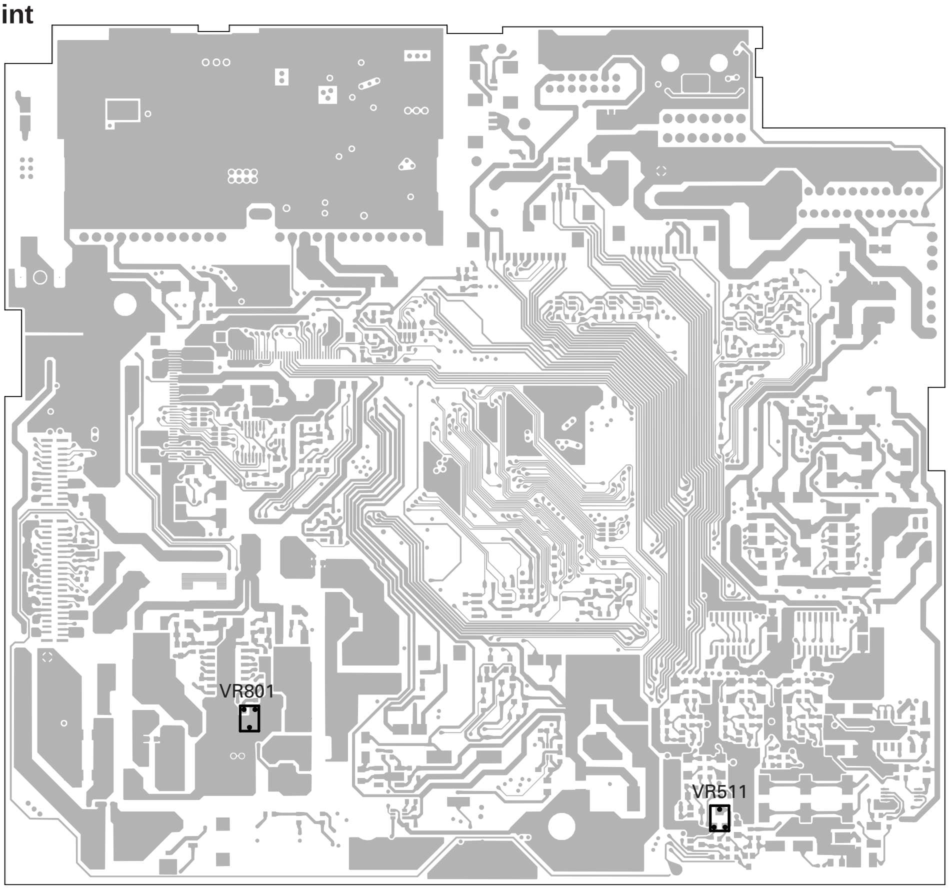


Waveform4

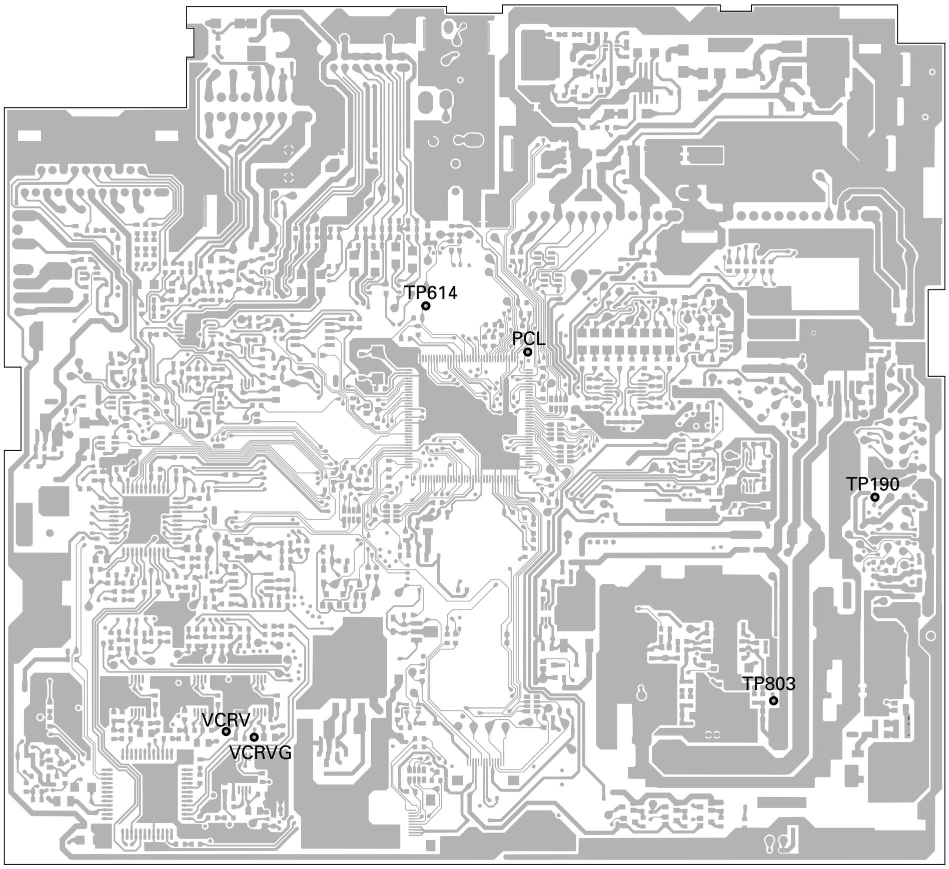
6.3 MOTHER UNIT ADJUSTMENT

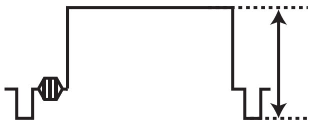
● **Adjustment Point**

SIDE A


VR801
VR511

SIDE B

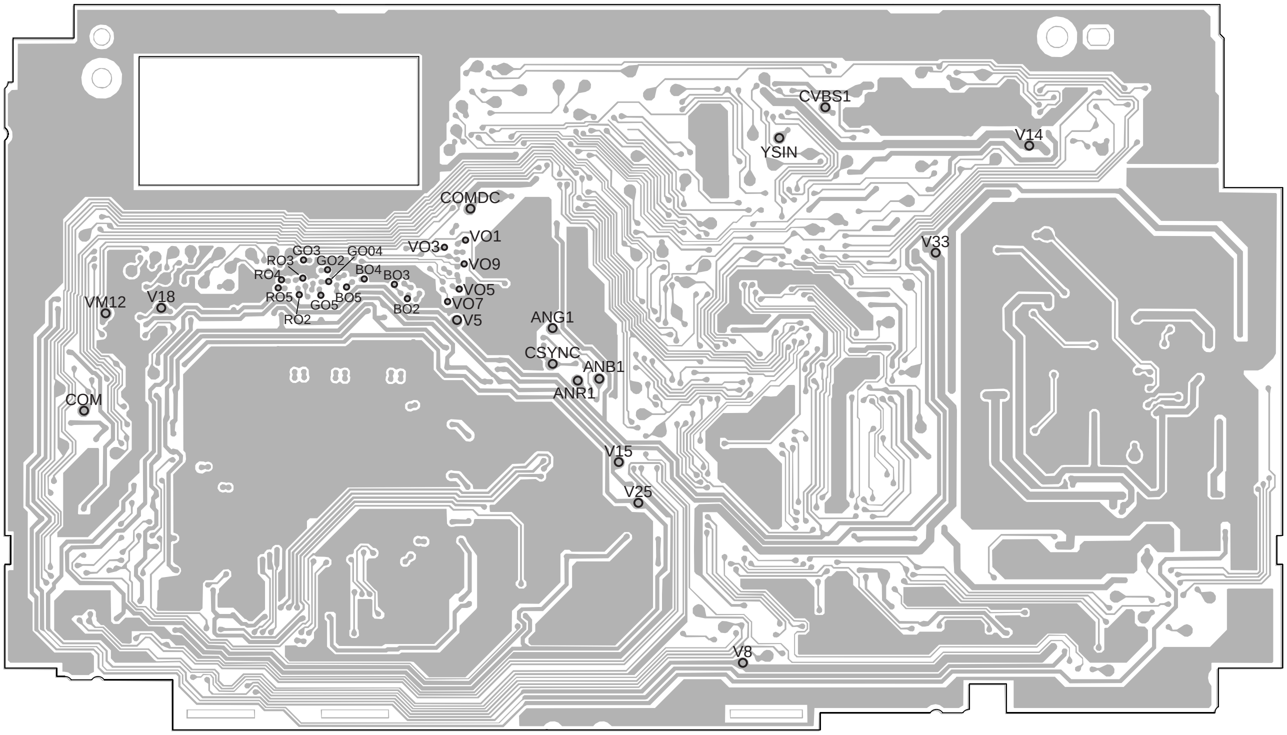

TP614
PCL
TP190
TP803
VCRV
VCRVG

Step	Mother PCB adjustment	Mode	Input signsl (input test pin,specs, other conditions)	Output signsl (measuring point, waveform)	Measuring instruments	Specs	Adjusting point
1	Main video level	AV	Input test pin: VCRV····100 IRE (white 100%), 1.0Vp-p, (input via 75ohms) VCRVG····(GND VIDEO GND)	Measuring point: TP190 	Oscilloscope	1.4V ± 0.05Vp-p Measure between the sync tip and 100 IRE (top wave). Symptoms with poor adjustment. Over level : Luminance is too high. Under level : Luminance is too low.	VR511
2	Clock frequency Check		IC601 pin56(TP614) to 5V	IC601 pin36(PCL)	Frequency Counter	18.874368MHz±754Hz	
3	DC-DC converter frequency Adjustment		Playback the DVD	Test point TP803	Frequency Counter	370kHz±5Hz	VR801

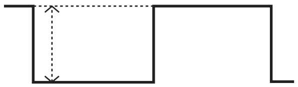
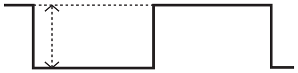
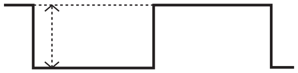
6.4 MONITOR PCB ADJUSTMENT

● **Adjustment Point**

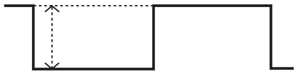
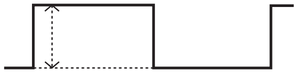
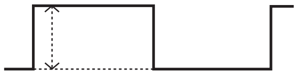
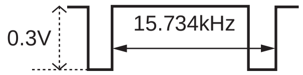
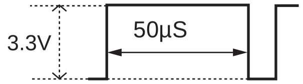
SIDE B


CVBS1
V14
YSIN
COMDC
VO1
VO3
VO9
V33
GO3
GO04
RO3
GO2
RO4
BO4
BO3
VO5
RO5
GO5
BO5
VO7
BO2
VM12
V18
RO2
V5
ANG1
CSYNC
ANB1
ANR1
COM
V15
V25
V8

NOTE : When shutting off the power supply of TC90A96AFG, be careful not to energize each IC terminal. However, IIC lines (SDA and SCL) is not included in this case and it is possible to energize them with up to 5V.

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
1	Check 3.3V power supply voltage	TP:14.4V to14V	C210 hot side (TP:V33)	—	V33 = 3.3 ± 0.25V	
2	Check 2.5V power supply voltage	TP:14.4V to14V	IC4182 1-pin (TP:V25)	—	V25 = 2.5 ± 0.15V	
3	Check 1.5V power supply voltage	TP:14.4V to14V	IC4183 1-pin (TP:V15)	—	V15 = 1.5 ± 0.08V	
4	Check 5V power supply voltage	TP:14.4V to14V	C4234 hot side (TP:V5)	—	V5 = 4.9 ± 0.3 V	
5	Check 8V power supply voltage	TP:14.4V to14V	C4198 hot side (TP:V8)	—	V8 = 8.0 ± 0.5 V	
6	Check 18.5V power supply voltage	TP:14.4V to14V	C4181 hot side (TP:V18)	—	V18 = 18.5 ± 0.5 V	
7	Check -12V power supply voltage	TP:14.4V to14V	C4207 hot side (TP:VM12)	—	VM12 = -12.0 ± 0.6 V	
8	Vcom amplifier output amplitude check	No definition	CN4007 1-pin (TP:COM)	—	4.70 ± 0.10 V 	Connect LCD panel for measurement
9	Tone voltage amplitude check V1	No definition	CN4007 57-pin (TP:VO1)	—	4.20 ± 0.30 V 	Connect LCD panel for measurement
10	Tone voltage amplitude check V3	No definition	CN4007 55-pin (TP:VO3)	—	1.80 ± 0.10 V 	Connect LCD panel for measurement

NOTE : When shutting off the power supply of TC90A64AFG, be careful not to energize each IC terminal. However, IIC lines (SDA and SCL) is not included in this case and it is possible to energize them with up to 5V.

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
11	Tone voltage amplitude adjustment V5	No definition	CN4007 53-pin (TP:VO5)	—	0.35 ± 0.10 V 	Connect LCD panel for measurement
12	Tone voltage amplitude adjustment V7	No definition	CN4007 51-pin (TP:VO7)	—	0.60 ± 0.10 V 	Connect LCD panel for measurement
13	Tone voltage amplitude adjustment V9	No definition	CN4007 49-pin (TP:VO9)	—	3.30 ± 0.20 V 	Connect LCD panel for measurement
14	Preparation for image check	Input synchronized signal to TP CSYNC	—	—		Input 0.3V (75Ω)
15	Check RGB digital output	Input white 100% signal to TP ANR1, ANG1, ANB1 (0.70Vpp±1%)	TP BO2 ~ BO5 TP GO2 ~ GO5 TP RO2 ~ RO5	—	Make sure that each output is "Hi" continuously during displaying image. 	When OSD is displayed in EEPROM adjustment mode, LOW output is mixed to the parts where there is a character.
16	Composite level adjustment	Input composite image 10STEP signal to TP CVBS1 (1.4Vpp±1%)	TP GO1	Resistor setting of SA13h D5-0	Using EEPROM adjustment mode, set CMP CONTRAST on 30 and decrease value one by one. Decrease value by one when "L" starts to appear on output while displaying GO1 image.	Using EEPROM adjustment mode, check that CONTRAST is being 168 to make adjustment. When OSD is displayed on EEPROM adjustment mode, ignore "L" output shown among lettered part.
			TP GO2 ~ GO5		Check that "H" always appears on each output while displaying image.	
17	YS performance check	Input signal to TP YSIN For abroad: 0-3.3V For J spec: 0.4-1.4V(75Ω)			Verify YS performs.	

NOTE : When shutting off the power supply of TC90A96AFG, be careful not to energize each IC terminal. However, IIC line (SDA and SCL) is not included in this case and it is possible to energize it with up to 5V.

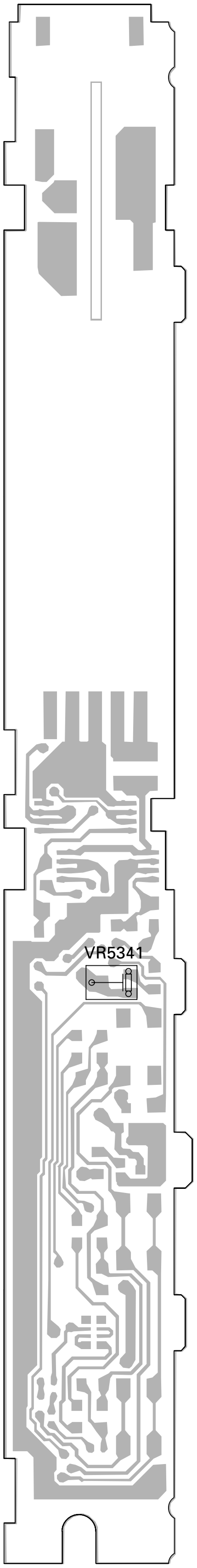
No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
18	YS, RGB sampling phase setting, check	No definition	—	Register setting for SA2Dh D15 ~ 12 : YS D11 ~ 8 : B D7 ~ 4 : G D3 ~ 0 : R	(Line writing): 0100 (Service): [YS (R, G, B) SAMPL] should be 12 in EEPROM test mode	Check EEP-ROM setting value after writing.
19	YS-OFFSET setting, check	No definition	—	Register setting of SA2Fh D3-0	(Line writing): 1111 (Service): [YS DELAY] should be 7 in EEPROM test mode	Check EEP-ROM setting value after writing.
20	Image check	Input composite image lamp signal (monochrome) to TP CVBS1	Screen	—	Make sure that tone changes smoothly, and there is no colored area in the entire display.	Execute to verify that 2-display IC digital-out is not bridged or “OPEN”ed.
21	Aging	No definition	—	—	Leave for more than 30 minutes in operation mode.	
22	Flicker adjustment	Input black-white reverse signal per 1 line to TP ANR1, ANG1, ANB1	Screen	IC4101-3pin (TP COMDC) DC output	Adjust the flicker level to minimum from all directions.	Black-white reverse signal can be the input to TP CVBS1 (however, adjustment in RGB comes first). Brightness level of reverse signal should be 50%. Adjustment point can be COM DC of flicker adjustment mode.

SA∗∗h in this chart means the sub-address of TC90A96AFG.

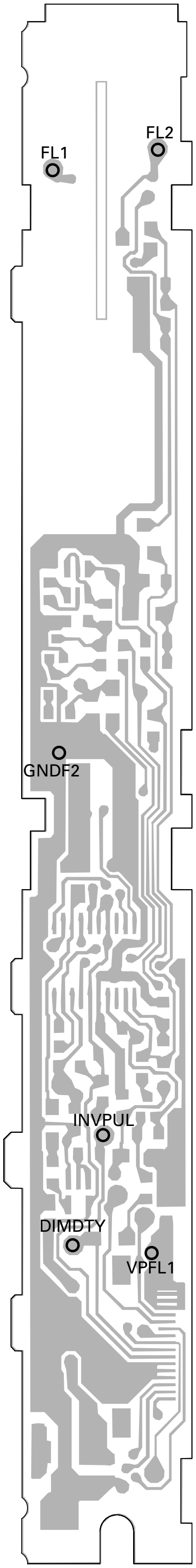
6.5 INVERTER PCB ADJUSTMENT

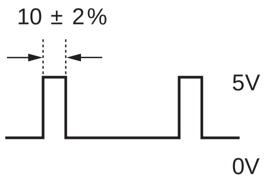
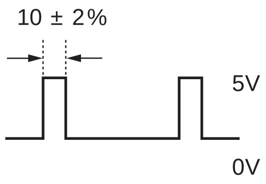
● **Adjustment Point**

SIDE A



SIDE B


FL2
FL1
GNDF2
INVPUL
DIMDTY
VPFL1

No.	Adjustment item	Input signal	Measurement point	Adjustment point	Adjustment	Note
1	Basic drive Frequency adjustment	14.4 ± 0.2V to TP VPFL1 TP DIMDTY : GND TP GNDFL : GND TP INVPUL : GND	TP FL1 TP FL2	VR5341	48.0 ± 0.1kHz	Connect 100kΩ between TP FL1 and FL2. Monitor the waveform after voltage division or TPFL2. Do not monitor TP FL1 directly (measurement meter may be damaged because of high voltage).
2	Check frequency switching	Input 98.0 ± 1kHz waveform below to INVPUL.  	TP FL1 TP FL2	—	49.0 ± 0.5kHz	Verify that the frequency of waveform measured in No.1 is 49kHz.
3	Check frequency switching	Input 104.0 ± 1kHz waveform below to INVPUL.  	TP FL1 TP FL2	—	52.0 ± 0.5kHz	Verify that the frequency of waveform measured in No.1 is 52kHz.

6.6 MONITOR TEST MODE

● EEPROM Setting Mode

1. Start-up

- Reset and start-up the monitor microcomputer while EPRTEST terminal is in the Low.
- Press EQ key + SOURCE key together to Reset Start.

2. Operation

Switching setting mode
Press [MENU] key of remote control unit to go to the next mode.
Selecting an adjustment item to be changed
Press [↑ ↓] key of remote control unit.
Changing value of the selected item
Press [← →] key of remote control unit.

3. Setting mode

(1) Flicker adjustment mode (start-up mode)
(2) Line adjustment 1 mode
(3) Line adjustment 2 mode
(4) Line adjustment 3 mode
(5) Line adjustment 4 mode
(6) Line adjustment 5 mode
(7) Line adjustment 6 mode
(8) Line adjustment 7 mode
(9) Line adjustment 8 mode
(10) Line adjustment 9 mode
(11) Line adjustment 10 mode
(12) Parameter setting mode for dimmer

4. Operation key

[Remote control code] head unit code

Key	Code
MENU	AD19AF63
↑	AD40
↓	AD41
←	AD42
→	AD43

Main unit key

(If pressing a monitor key in this adjustment mode, there is no affection in operation of the main unit.)

∗ Please note that there is a model by which the remote control signal is not connected to the monitor microcomputer (in that case, operation should be done only by key).

∗ After writing a setting value to EEPROM, read and display it.
Writing and reading should be done in 16-bit unit. The bit number of settings varies in each item.

∗ After changing the value of CS (CHECKSUM), take exclusive OR (XOR) with 8-bit and execute writing.
After writing this CS value to EEPROM, read and display it, too.
If the written value and the read value are different, change the color of the read value.

5. Memory item list and EEPROM

EEPROM memory alignment chart (S-93C56BD0I-JS)

	ADDRESS	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
RELATED DIMMER	00h	Outside light of dimmer adjustment coordinates (high)								Backlight of dimmer adjustment coordinates (high)							
	01h	Outside light of dimmer adjustment coordinates (middle)								Backlight of dimmer adjustment coordinates (middle)							
	02h	Outside light of dimmer adjustment coordinates (low)								Backlight of dimmer adjustment coordinates (low)							
	03h	Outside light threshold for dimmer (high)								Outside light threshold for dimmer (low)							
	04h	Maximum value of backlight output								Minimum value of backlight output							
	05h	Checksum EEPROM address:03h-04h															
RELATED PIP (including operation settings)	06h	RGB &YS horizontal positioning								Don't care							
	07h	YS sampling phase				Bch sampling phase				Gch sampling phase				Rch sampling phase			
	08h	Don't care												YS internal delay adjustment value			
	09h	Checksum EEPROM address:06h-08h															
RELATED PIP (excluding operation settings)	0Ah	Common reference output DC center value								Common reverse output amplitude adjustment value							
	0Bh	Don't care		Brightness R						Don't care							
	0Ch	Don't care		Brightness G						Don't care							
	0Dh	Don't care		Brightness B						Don't care							
	0Eh	Don't care									Main Y contrast						
	0Fh	Don't care		Main horizontal enhancer						Sub vertical enhancer						Don't care	
				Gain		Limiter			fo	Gain		Replicate		Coring			
	10h	Don't care									Sub Y contrast						
	11h	Don't care		Main horizontal enhancer						Sub vertical enhancer						Don't care	
				Gain		Limiter			fo	Gain		Replicate		Coring			
	12h	Don't care	RGB simultaneous γslope A			R output DC offset				Don't care		RGB simultaneous γ1 inflection point					
	13h	RGB simultaneous γslope B			RGB simultaneous γ2 inflection point					RGB simultaneous γslope C			RGB simultaneous γ3 inflection point				
	14h	Don't care				G output DC offset				Don't care							
	15h	Don't care				B output DC offset				Don't care							
	16h	SA24h UPPER								SA24h LOWER							
	17h	SA25h UPPER								SA25h LOWER							
	18h	SA26h UPPER TV								SA26h LOWER TV							
	19h	SA26h UPPER								SA26h LOWER							
	1Ah	SA27h UPPER TV								SA27h LOWER TV							
	1Bh	SA27h UPPER								SA27h LOWER							
	1Ch	SA46h UPPER								SA46h LOWER							
	1Dh	SA47h UPPER								SA47h LOWER							
	1Eh	SA48h UPPER								SA48h LOWER							
	1Fh	SA49h UPPER								SA49h LOWER							
	20h	SA4Ah UPPER								SA4Ah LOWER							
	21h	SA4Bh UPPER								SA4Bh LOWER							
	22h	SA4Ch UPPER								SA4Ch LOWER							
	23h	SA4Dh UPPER								SA4Dh LOWER							
	24h	SA4Eh UPPER								SA4Eh LOWER							
	25h	SA4Fh UPPER								SA4Fh LOWER							
	26h	Dot search threshold								YS search threshold							
	27h	Phase search threshold								Xdisp (display difference permissible level)							
	28h	Don't care								YS disp (display difference permissible level)							
	29h	Checksum EEPROM address:0AH-28H															
	2AH	Don't care								Common reverse output DC center value reference							
RELATED TOUCH PANEL	2Bh	Touch panel X coordinate 1								Touch panel Y coordinate 1							
	2Ch	Touch panel X coordinate 2								Touch panel Y coordinate 2							
	2Dh	Touch panel X coordinate 3								Touch panel Y coordinate 3							
	2Eh	Touch panel X coordinate 4								Touch panel Y coordinate 4							
	2Fh	Touch panel X coordinate 5								Touch panel Y coordinate 5							
	30h	Touch panel X coordinate 6								Touch panel Y coordinate 6							
	31h	Touch panel X coordinate 7								Touch panel Y coordinate 7							
	32h	Touch panel X coordinate 8								Touch panel Y coordinate 8							
	33h	Touch panel X coordinate 9								Touch panel Y coordinate 9							

	ADDRESS	Bit15	Bit14	Bit13	Bit12	Bit11	Bit10	Bit9	Bit8	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
RELATED TOUCH PANEL	34h	Touch panel X coordinate 10								Touch panel Y coordinate 10							
	35h	Touch panel X coordinate 11								Touch panel Y coordinate 11							
	36h	Touch panel X coordinate 12								Touch panel Y coordinate 12							
	37h	Touch panel X coordinate 13								Touch panel Y coordinate 13							
	38h	Touch panel X coordinate 14								Touch panel Y coordinate 14							
	39h	Touch panel X coordinate 15								Touch panel Y coordinate 15							
	3Ah	Touch panel X coordinate 16								Touch panel Y coordinate 16							
	3Bh	Outermost circumference X min								Outermost circumference Y min							
	3Ch	Outermost circumference X max								Outermost circumference Y max							
	3Dh	Touch panel calibration adjustment result								Touch panel outermost circumference adjustment result							
	3Eh	Checksum EEPROM address:2BH-3DH															
Others	3FH	Flicker adjustment completion (writing of microcomputer) *A				EEPROM adjustment completion (writing of production engineering jig) *B				EJECT lock value							
Addition	40H	Don't care				Ch sampling phase reference				Ch sampling phase reference				Ch sampling phase reference			
To be determined	41H	Don't care															
	～	Don't care															
	7FH	Don't care															

∗ The order of RELATED DIMMER, RELATED PIP, RELATED TOUCH PANEL and others is determined according to frequency of changing.

∗ When a writing & reading error or data check (checksum, magnitude relation) error occurs, initialization is done with data belonging to the software at the error time, and initialization is performed per divided section described above.
However, RELATED DIMMER should be further divided into sections such as address 00H～02H and 03H～04H, then initialized.

∗ The user changeable parts (address 00H～02H) in the segment RELATED DIMMER is not a target of checksum.

∗ Concerning the segment RELATED DIMMER, considering PIP register configuration, data obtained from PIP can be stored without software processing.
And the alignment is designed to send data obtained from EEPROM to PIP without processing it. (same as NN629)
Each area is divided according as whether it is changed during operation or not. (Checksum division is carried out to each.)

∗ Address 2H, remote control reverse output DC center value reference is not a target of checksum because it maintains default settings, and basically it is READ ONLY and is not shipped.

∗ Address 40H, sampling phase reference is not a target of checksum because it maintains default settings, and basically it is READ ONLY and is not shipped.

∗ At the time of EEPROM reset, the address above (excluding 2AH, 40H) is initialized with data belonging to the software.

∗A : Microcomputer writes the result whether flicker adjustment is performed or not (direct mode, EEPROM adjustment screen).

∗B : Production engineering jig: After completing EEPROM adjustment, the value is written (this value is displayed on the confirmation screen).

6. Screen specification of each mode

Actual OSD screen samples are showed inside of the thick frame in the chart below.
The numbers in the chart are the changed parts during adjustment in each screen (maximum value is showed in the sample).
The items are for design review and line adjustment.

■ Flicker adjustment mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Common reverse output center value	[0-255]	COM_DC	255		

＊■ Note1 : The contents of [COM DC, clock phase] should be reflected to the reverse output center reference value.

■ Line adjustment 1 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
					LINE1
Bright	[0-255]	BRIGHT	150	NOT	EEPROM
RGB simultaneous contrast (SA0C [D0-7])	[0-255]	CONTRAST	168	NOT	EEPROM
Common reverse output amplitude adjustment value	[0-255]	COM AMP AJ	150		
R output DC offset (SA1A [D11-8])	[0-15]	ROUT BIAS	8		
G output DC offset (SA1C[D11-8])	[0-15]	GOUT BIAS	8		
B output DC offset (SA1E[D11-8])	[0-15]	BOUT BIAS	8		
Main Y contrast (SA0F[D5-0])	[0-63]	RGB CNTRST	34		
Sub Y contrast (SA13[D5-0])	[0-63]	CMP CNTRST	26		
				CS	FFFF

- Adjust common reverse output amplitude by line in order to cancel the variation of hardware quality.
- [COM AMPAJ] is a default value set by line and stored in EEPROM.
- In the normal operation, [BRIGHT] is determined based on COM AMPAJ (common reverse output amplitude adjustment) and the attached “Image quality table” according to user setting steps, and this value controls monitor microcomputer [COM_AC] output.
- User’s adjustment of “Black density (=bright)” on this product is done by controlling common reverse output amplitude only, not done by brightness of 2-display IC.
- User’s adjustment of “Black density” is not reflected to [BRIGHT] in the test mode of single monitor.
  When adjusting [COM AMPAJ], [BRIGHT] changes accordingly. (Memorized [COM AMPAJ] is the same as the [BRIGHT] value of step0.)
- When entering test mode in product condition, “Black density” by user’s adjustment is reflected to [BRIGHT] value.
  If changing [BRIGHT] value in the test mode, it is not reflected to the user setting value.

＊■ Note1 : The contents of [BRIGHT] and [CONTRAST] are the reference value for adjusting the other items, and not stored in EEPROM.

＊■ Note2 : Be careful about the contents of [R, G, B OUT BIAS] and [RGB, CMP CONTRST] since their indicated value / EEPROM written value and their registered value of 2-display IC (TC90A96AFG) are different.
(Software conversion is running because correlation between registered value of 2-display IC and display output is not linear.)

[R, G, BOUT BIAS]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
15	15	0111	(MAX)
14	14	0110	
:	:	:	
9	9	0001	
8	8	0000	(TYP)
7	7	1111	
:	:	:	
1	1	1001	
0	0	1000	(MIN)

[RGB, CMP, CNTRST]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
63	63	011111	(MAX)
62	62	011110	
:	:	:	
33	33	000001	
32	32	000000	(TYP)
31	31	111111	
:	:	:	
1	1	100001	
0	0	100000	(MIN)

■ Line adjustment 2 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
RGB & YS horizontal alignment (SA2B [D15-8])	[0-255]	DOT H POSIT	63		LINE2
YS sampling phase 1 (SA2D [D15-12])	[0-15]	YS SAMPL	8		
AD sampling phase B (SA2D [D11-8])	[0-15]	B SAMPL	8		
AD sampling phase G (SA2D [D7-4])	[0-15]	G SAMPL	8		
AD sampling phase R (SA2D [D3-0])	[0-15]	R SAMPL	8		
YS internal delay adjustment phase (SA2F [D3-0])	[0-15]	YS DELAY	8		
				CS	FFFF

* ■ Note : Be careful about the contents of [YS,R,G,B SAMPL] and [YS DELAY] since their indicated value / EEPROM written value and their registered value of 2-display IC (TC90A96AFG) are different.
(Software conversion is running because correlation between registered value of 2-display IC and display output is not linear.)

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
15	15	0111	(MAX)
14	14	0110	
:	:	:	
9	9	0001	
8	8	0000	(TYP)
7	7	1111	
:	:	:	
1	1	1001	
0	0	1000	(MIN)

Line adjustment 3 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Dot search threshold	[0-255]	TH DOT	112		LINE3
YS search threshold	[0-4]	TH YS	3		
Phase search threshold	[0-255]	TH PHASE	112		
Xdisp	[0-63]	X DISP	32		
Ydisp	[0-4]	YS DISP	2		
				CS	FFFF

Line adjustment 4 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Main horizontal enhancer gain (SA10 [D13-12])	[0-3]	MH GAIN	0		LINE4
Main horizontal enhancer limiter (SA10 [D11-10])	[0-3]	MH LIMIT	0		
Main horizontal enhancer f0 (SA10 [D8])	[0-1]	MH F0	0		
Main vertical enhancer gain (SA10 [D7-6])	[0-3]	MV GAIN	0		
Main vertical enhancer replicable (SA10 [D5-4])	[0-3]	MV ORI	0		
Main vertical enhancer coring (SA10 [D3-2])	[0-3]	MV CORE	0		
				CS	FFFF

■ Line adjustment 5 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Sub horizontal enhancer gain (SA14 [D13-12])	[0-3]	SH GAIN	1		LINE5
Sub horizontal enhancer limiter (SA14 [D11-10])	[0-3]	SH LIMIT	1		
Sub horizontal enhancer f0 (SA14 [D8])	[0-1]	SH F0	1		
Sub vertical enhancer gain (SA14 [D7-6])	[0-3]	SV GAIN	2		
Sub vertical enhancer replicable (SA14 [D5-4])	[0-3]	SV ORI	1		
Sub vertical enhancer coring (SA14 [D3-2])	[0-3]	SV CORE	2		
				CS	FFFF

■ Line adjustment 6 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Brightness R (SA0C [D13-8])	[0-63]	BRIGHT R	16	LINE6	
Brightness G (SA0D [D13-8])	[0-63]	BRIGHT G	16		
Brightness B (SA0E [D13-8])	[0-63]	BRIGHT B	16		
γ control ON/OFF (SA1A [D15])		GAMMA	OFF		
RGB simultaneous γ1 inflection point (SA1A [D5-D0])	[0-63]	GAMMA 1	0		
RGB simultaneous γ2 inflection point (SA1B [D12-8])	[0-31]	GAMMA 2	4		
RGB simultaneous γ3 inflection point (SA1B[D4-D0])	[0-31]	GAMMA 3	1		
RGB simultaneous γ slope A (SA1A [D14-12])	[0-7]	GAMMASLP A	4		
RGB simultaneous γ slope B (SA1B [D15-13])	[0-7]	GAMMASLP B	1		
RGB simultaneous γ slope C (SA1B [D7-5])	[0-7]	GAMMASLP C	1	CS	FFFF

* ■ Note : Be careful about the contents of [BRIGHTNESS R, G, B] since their indicated value / EEPROM written value and their registered value of 2-display IC (TC90A96AFG) are different.
(Software conversion is running because correlation between registered value of 2-display IC and display output is not linear.)

[BRIGHTNESS R, G, B]

Indicated value (=adjustment value) (DEC)	EEPROM written value (DEC)	Registered value of 2- display IC (BIN)	
63	63	011111	(MAX)
62	62	011110	
:	:	:	
33	33	000001	
32	32	000000	(TYP)
31	31	111111	
:	:	:	
1	1	100001	
0	0	100000	(MIN)

Line adjustment 7 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
					LINE7
Main PLL0 (SA24 [D15-D8])	[0-255]	MAIN PLL0	158		
Main PLL1 (SA24 [D7-D0])	[0-255]	MAIN PLL1	13		
Main PLL2 (SA25 [D15-D8])	[0-255]	MAIN PLL2	204		
Main PLL3 (SA25 [D7-D0])	[0-255]	MAIN PLL3	4		
				CS	FFFF

Line adjustment 8 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
					LINE8
TV sub PLL0 (SA26 [D15-8])	[0-255]	SUB PLL0 TV	140		
TV sub PLL1 (SA26 [D7-D0])	[0-255]	SUB PLL1 TV	136		
Other sub PLL0 (SA27 [D15-D8])	[0-255]	SUB PLL0	140		
Other sub PLL1 (SA27 [D7-D0])	[0-255]	SUB PLL1	141		
TV sub PLL2 (SA28 [D15-8])	[0-255]	SUB PLL2 TV	100		
TV sub PLL3 (SA28 [D7-D0])	[0-255]	SUB PLL3 TV	68		
Other sub PLL0 (SA29 [D15-D8])	[0-255]	SUB PLL2	152		
Other sub PLL1 (SA29 [D7-D0])	[0-255]	SUB PLL3	135		
				CS	FFFF

Line adjustment 9 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
SA46[D15-8]	[0-255]	SA46H UPPER	0		LINE9
SA46[D7-D0]	[0-255]	SA46H LOWER	0		
SA47[D15-8]	[0-255]	SA47H UPPER	0		
SA47[D7-D0]	[0-255]	SA47H LOWER	0		
SA48[D15-8]	[0-255]	SA48H UPPER	0		
SA48[D7-D0]	[0-255]	SA48H LOWER	0		
SA49[D15-D8]	[0-255]	SA49H UPPER	0		
SA49[D7-D0]	[0-255]	SA49H LOWER	0		
SA4A[D15-8]	[0-255]	SA4AH UPPER	0		
SA4A[D7-D0]	[0-255]	SA4AH LOWER	0	CS	FFFF

■ Line adjustment 10 mode

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
SA4B[D15-D8]	[0-255]	SA4BH UPPER	0		LINE10
SA4B[D7-D0]	[0-255]	SA4BH LOWER	0		
SA4C[D15-D8]	[0-255]	SA4CH UPPER	0		
SA4C[D7-D0]	[0-255]	SA4CH LOWER	0		
SA4D[D15-D8]	[0-255]	SA4DH UPPER	0		
SA4D[D7-D0]	[0-255]	SA4DH LOWER	0		
SA4E[D15-D8]	[0-255]	SA4EH UPPER	0		
SA4E[D7-D0]	[0-255]	SA4EH LOWER	0		
SA4F[D15-D8]	[0-255]	SA4FH UPPER	0		
SA4F[D7-D0]	[0-255]	SA4FH LOWER	0	CS	FFFF

■ Parameter setting mode for dimmer

Setting item	Adjustment range	Display item	Adjustment value Write value (DEC)		
Maximum Backlight power	[0-255]	BL MAX	C4		DIMMER
Minimum Backlight power	[0-255]	BL MIN	59		
Dimmer threshold (high)	[0-255]	REF H	C0		
Dimmer threshold (low)	[0-255]	REF L	60		
Outside light point (high)	[0-255]	LUM H	E2		
Outside light point (middle)	[0-255]	LUM M	87		
Outside light point (low)	[0-255]	LUM L	52		
Backlight point (high)	[0-255]	BL H	C4		
Backlight point (middle)	[0-255]	BL M	C4		
Backlight point (low)	[0-255]	BL L	68	CS	FFFF

＊ Data of point for dimmer (coordinates) is stored in EEPROM but is not a target of CS since that is changeable by user's operation.

■ List of EEPROM write values

DIMMER relation

Item	E2PROM initial value (HEX)
Upper limit of backlight output	C4
Lower limit of backlight output	59
Threshold value (high) of outer light for DIMMER	C0
Threshold value (low) of outer light for DIMMER	60
Outer light value on DIMMER-adjusted coordinate (high)	E2
Outer light value on DIMMER-adjusted coordinate (middle)	87
Outer light value on DIMMER-adjusted coordinate (low)	52
Backlight value on DIMMER-adjusted coordinate (high)	C4
Backlight value on DIMMER-adjusted coordinate (middle)	C4
Backlight value on DIMMER-adjusted coordinate (low)	68

Touch panel relation

Item	E2PROM initial value (HEX)	E2PROM initial value (DEC)
X coordinate (1-16) of touch panel	00	00
Y coordinate (1-16) of touch panel	00	00
Ultimate perimeter (Xmin) of touch panel	3A	58
Ultimate perimeter (Xmax) of touch panel	F8	248
Ultimate perimeter (Ymin) of touch panel	40	64
Ultimate perimeter (Ymax) of touch panel	F1	241
Result of adjusting calibration of touch panel	00	00
Result of adjusting ultimate perimeter of touch panel	00	00

IC relation on Screen 2

Item	E2PROM initial value (HEX)	E2PROM initial value (DEC)	
COM_DC	(5C)	(92)	*The value shown on the left is initial value which is adjusted based on No. 22 Flicker Adjustment in 6.4 Monitor PCB Adjustment.
COM_AMP_AJ	96	150	
ROUT_BIAS	08	8	
GOUT_BIAS	08	8	
BOUT_BIAS	08	8	
RGB_CNTRST	22	34	
CMP_CNTRST	1A	26	*The value shown on the left is initial value which is adjusted based on No. 16 Composite Level Adjustment in 6.4 Monitor PCB Adjustme -nt.
DOT_H_POSIT	3F	63	
YS_SAMPL	0C	12	
B_SAMPL	0C	12	
G_SAMPL	0C	12	
R_SAMPL	0C	12	
YS_DELAY	07	7	
TH_DOT	70	112	
TH_YS	03	3	
TH_PHASE	70	112	
X_DISP	20	32	
YS_DISP	02	2	
M_H_GAIN	00	0	
M_H_LIMIT	00	0	
M_H_F0	00	0	
M_V_GAIN	00	0	
M_V_ORI	00	0	
M_V_CORE	00	0	
S_H_GAIN	00	0	
S_H_LIMIT	01	1	
S_H_F0	01	1	
S_V_GAIN	00	0	
S_V_ORI	01	1	
S_V_CORE	02	2	
BRIGHT_R	10	16	
BRIGHT_G	10	16	
BRIGHT_B	10	16	
GAMMA_1	00	0	
GAMMA_2	04	4	
GAMMA_3	01	1	
GAMMASLP_A	04	4	
GAMMASLP_B	01	1	
GAMMASLP_C	01	1	
SA24H_UPPER	9E	158	
SA24H_LOWER	0D	13	
SA25H_UPPER	CC	204	
SA25H_LOWER	04	4	
SA26H_UPPER_TV	8C	140	
SA26H_LOWER_TV	88	136	
SA26H_UPPER	8C	140	
SA26H_LOWER	8D	141	
SA27H_UPPER_TV	64	100	
SA27H_LOWER_TV	44	68	
SA27H_UPPER	98	152	
SA27H_LOWER	6B	107	
SA46H_UPPER	02	2	
SA46H_LOWER	00	0	
SA47H_UPPER	00	0	
SA47H_LOWER	00	0	
SA48H_UPPER	00	0	
SA48H_LOWER	00	0	
SA49H_UPPER	00	0	
SA49H_LOWER	00	0	
SA4AH_UPPER	00	0	
SA4AH_LOWER	00	0	
SA4BH_UPPER	00	0	
SA4BH_LOWER	00	0	
SA4CH_UPPER	00	0	
SA4CH_LOWER	00	0	
SA4DH_UPPER	00	0	
SA4DH_LOWER	00	0	
SA4EH_UPPER	00	0	
SA4EH_LOWER	00	0	
SA4FH_UPPER	00	0	
SA4FH_LOWER	00	0	

6.7 TOUCH PANEL TEST MODE

1 TOP MENU

1.1 Screen configuration

Select each item of touch panel test mode.

```
  012345678901234567890123456789
   ###Calibration/TP - test###
0                                 0
1                                 1
2  ※1.Setup TP effective range    2
3  ※2.Setup calibration           3
4   3.Touch-panel test            4
5   4.Calibration test            5
6   5.Data initialize             6
7  [ENTER]      Menu selection    7
8  [UP/DUWN]    Cursor movement   8
9  [ACC OFF]    End of test       9
```

Currently selected item is displayed in blue (default : 1).

＊Background : black
Characters : white
Selected characters : blue
Confirmation indication of conditioned item : red
Non-selectable items : gray

1.2 Operation specification

Reset Start by pressing ATT and ANGLE+ to go to touch panel calibration mode.
Select each item with up and down keys and go to each setting screen with A.MENU key.

[Remote control code]

Key	Code
ENTER	AD19AF63
↑	AD40
↓	AD41

[Main unit key]

Key
ENTER
↑
↓

1.3 Processing detail

There is no condition in MENU selection.

1.4 Screen detail

The ※ mark meaning “conditioned item” is indicated under following condition:

※ 1
When outermost circumference is adjusted, it is indicated.

※ 2
When 16-point adjustment is done, it is indicated.

The ※ mark meaning “conditioned item” is not indicated under following condition:
No calibration is done after product completion.
Adjusted value initialization is done.
EEPROM initialization is done.

Confirmation indication of conditioned EEPROM Newly available with this product
See “Production engineering test : result feedback specification document” for more detail.

2 OUTERMOST CIRCUMFERENCE

2.1 Screen configuration

Go over the outermost circumference of touch panel to store the set value to EEPROM.

```
  012345678901234567890123456789
0  ##Setup TP effective range##  0
1   The present of touch-panel   1
2   effect range(before,after)   2
3      X min  : ( 56,120)        3
4      Y min  : ( 63,120)        4
5      X max  : (243,180)        5
6      Y max  : (234,180)        6
7  <CAUTION>                     7
8  Please touch around panel     8
9  [ENTER]  Check the Value      9
```

∗ [before] is the data stored already in EEPROM.
[after] is the data going to be stored now.

Audit result confirmation screen : normal case

```
  012345678901234567890123456789
0                                0
1                                1
2                                2
3                                3
4              O.K               4
5                                5
6                                6
7                                7
8  [ENTER]  Return to Menu       8
9                                9
```

Audit result confirmation screen: abnormal case

```
  012345678901234567890123456789
0                                0
1                                1
2                                2
3                                3
4              N.G               4
5                                5
6                                6
7                                7
8  [ENTER]  Return to Menu       8
9                                9
```

NG condition information

2.2 Operation specification

Touch the outermost circumference of screen, and take outermost circumference value of X, Y.

Press [ENT] key of main unit or remote control unit to finish adjustment.
After finishing adjustment, if a taken value is within permissible zone, enter [O.K] at the center, and if it is outside permissible zone, enter [NG] at the center.
Then, press [ENT] key of main unit or remote control unit to return to TOP MENU.

2.3 Processing detail

Press [ENT] key of main unit or remote control unit to finish adjustment and store setting value (maximum and minimum value) to EEPROM only when the taken value is within permissible zone.

Receive confirmation screen TP and display OK or NG after fulfilling the following conditions:
[O.K] is displayed after storing a taken value to EEPROM.
[NG] is displayed when a taken value is determined to be outside permissible zone.

Default is showed below.

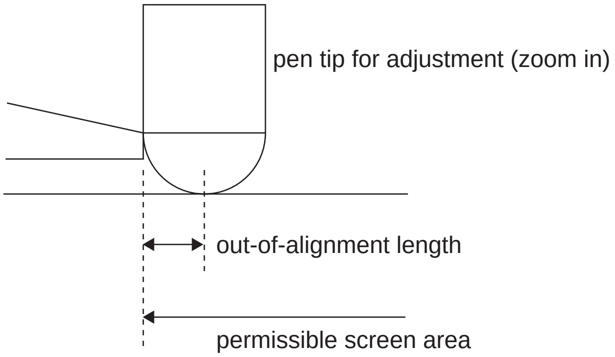
Coordinates	Minimum	Maximum
X	58	248
Y	64	241

2.4 Additional information

Consider diameter of the top of jig (pen tip) before adjusting outermost circumference.

Out-of-alignment length 0.8 mm

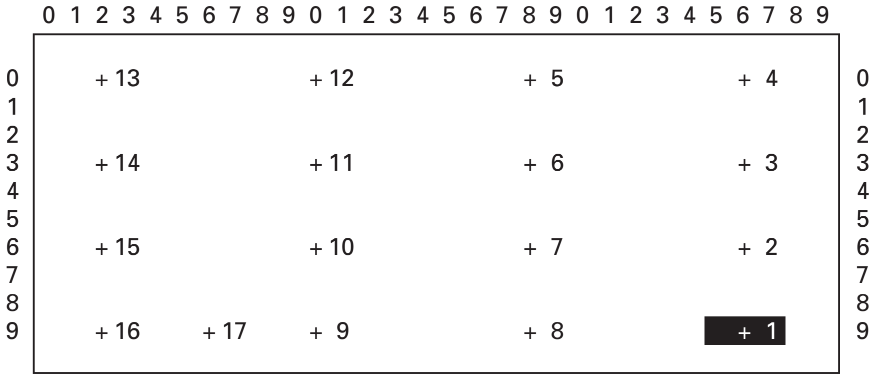
Perform calibration data operation with the size calculated by subtracting out-of-alignment length from permissible screen area.



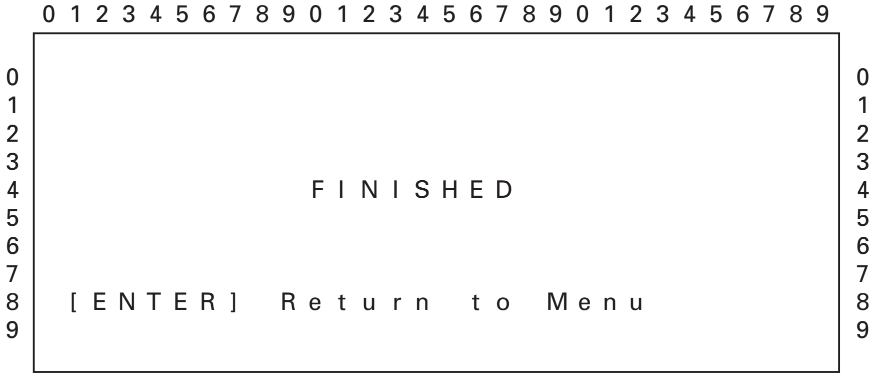
3 CALIBRATION

3.1 Overview

Press cursor [+] on the screen in turn to calibrate and store the set value to EEPROM.


0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
+ 13
+ 12
+ 5
+ 4
+ 14
+ 11
+ 6
+ 3
+ 15
+ 10
+ 7
+ 2
+ 16
+ 17
+ 9
+ 8
+ 1
0 1 2 3 4 5 6 7 8 9

∗ It is invalid if the distant point from displayed block is pressed.


0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9
0 1 2 3 4 5 6 7 8 9

FINISHED

[ENTER] Return to Menu

∗ The number above shows the order of displaying cursor.
∗ [FINISHED] above is displayed when the number 17 is pressed.

3.2 Operation specification

Execute calibration by pressing cursor displayed at 16 points on the screen in turn and press one point to finish at the end (total 17 points).
After the 17th point is displayed, [FINISHED] is indicated at the center of the screen.
Cursor is always showing one point only and the next cursor is displayed after pressing one correctly.
Press [ENT] key of main unit or remote control unit to return to TOP MENU.

When pressing [ESC] during adjustment, the adjusted value is not stored and TOP MENU screen is displayed.

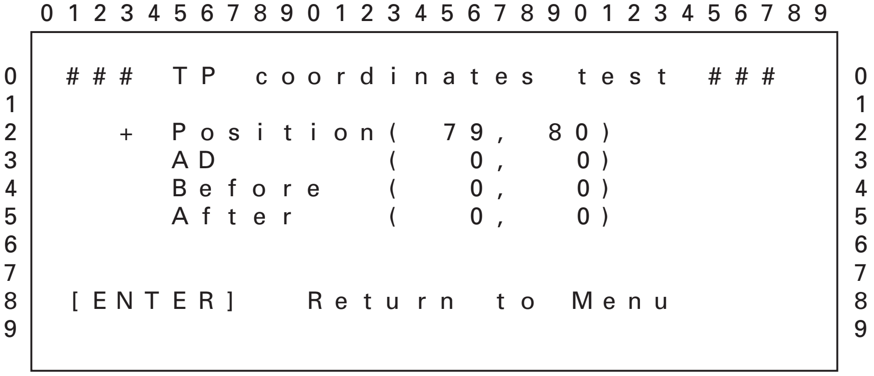
3.3 Processing detail

The taken setting value is stored in EEPROM only when pressing the 17th point, and [FINISHED] is displayed after storing.
See “Engineering Specification (monitor) EEPROM Memory Alignment” about the area for storing EEPROM settings.
See “Attachment 1 Calibration Settings” about cursor indicating position.
See “Attachment 2 Calibration Settings” about setting value of cursor point.

4 TOUCH PANEL COORDINATES AUDIT

4.1 Screen configuration

Check displayed coordinates before and after correction when pressing touch panel and perform operation check.



```
   0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
0   ### TP coordinates test ###                                0
1                                                              1
2      + Position(  79,  80)                                   2
3        AD      (   0,   0)                                   3
4        Before  (   0,   0)                                   4
5        After   (   0,   0)                                   5
6                                                              6
7                                                              7
8   [ENTER]   Return to Menu                                   8
9                                                              9
```

M152 : The + mark is not displayed at 16 points on the screen.

4.2 Operation specification

Move [+] mark by up and down, right and left keys and display its OSD coordinates.
Press [ENT] key of main unit or remote control unit to return to TOP MENU.

[Remote control unit code]

Key	Code
ENTER	AD19AF63
↑	AD40
↓	AD41
←	AD42
→	AD43

Operatable with main unit key

Operatable only with remote control unit

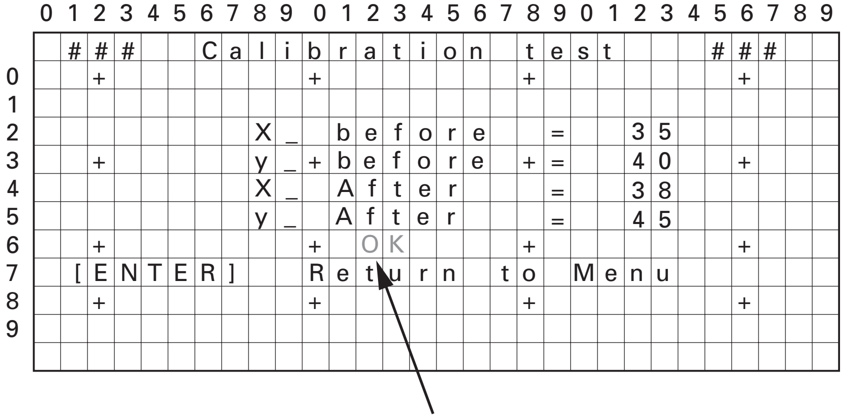
4.3 Processing detail

∗Explanation about displayed coordinates (from up to down)
(79, 80) : Drawing system coordinates of the cross point of horizontal and vertical lines (X direction, Y direction [0-500, 0-240]).
(0,0) : AD data value of the coordinates of pressed point (X direction, Y direction).
(0,0) : The coordinates of normalized AD data of pressed point within permissible zone (X direction, Y direction).
(0,0) : The coordinates corrected by calibration of the normalized coordinates (X direction, Y direction).

Specification correction
Rounding was done within the setting range with outermost circumference adjustment in the conventional product (AVH-P9DVA).
When value more than outermost circumference value was entered, the outermost circumference value was used.
From this time, considering that audit may be performed without outermost circumference adjustment, no limit is set.

4.4 Screen processing (additional)

The + mark at the point touched on screen is displayed.
When a finger etc. is detached, the + mark at the point pressed at the last moment is displayed continuously.
The + mark displayed when being pressed is showed at the under layer of the fixed red + mark.
The value displayed at that time is still being displayed.



	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
		#	#	#			C	a	l	i	b	r	a	t	i	o	n		t	e	s	t				#	#	#		
0			+								+								+								+			
1																														
2									X	_		b	e	f	o	r	e			=			3	5						
3			+						y	_	+	b	e	f	o	r	e		+	=			4	0			+			
4									X	_		A	f	t	e	r				=			3	8						
5									y	_		A	f	t	e	r				=			4	5						
6			+								+		O	K					+								+			
7		[	E	N	T	E	R	]			R	e	t	u	r	n		t	o		M	e	n	u						
8			+								+								+								+			
9																														

OK, NG judgment indication

4.5 Judgment processing

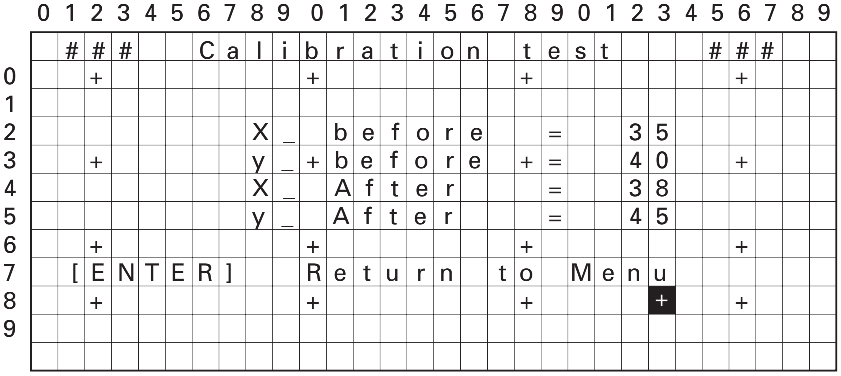
According to the length between + indication and touched coordinates (the point where the cursor is pointed), OK or NG is indicated.

OK condition	the length between + position and cursor indication is within ± 6 mm at the center
NG condition	except OK condition

5 TOUCH PANEL CONFIRMATION

5.1 Screen configuration

Check displayed coordinates before and after correction when pressing touch panel and perform operation check.



```
   012345678901234567890123456789
    ###  Calibration test   ###
0    +       +       +       +
1
2          X_ before  =  35
3    +     y_+before +=  40  +
4          X_ After   =  38
5          y_ After   =  45
6    +       +       +       +
7   [ENTER]  Return to Menu
8    +       +       +    +  +
9
```

5.2 Operation specification

Check the coordinates before and after correction by touching the touch panel.
Press [ENT] key of main unit or remote control unit to return to TOP MENU.

5.3 Processing detail

Displayed items

panel x_before	=	∗	normalized data before calibration (0-255)
panel y_before	=	∗	normalized data before calibration (0-255)
panel x_after	=	∗	normalized data after calibration (0-255)
panel y_after	=	∗	normalized data after calibration (0-255)

Follow the steps below to convert AD value entered from touch panel to the corrected coordinates.
(Follow ① → ② in turn. Execute them during regular operation.)

① Data expansion of raw coordinates
Coordinates after data expansion = (raw coordinates − minimum value) × 255 ÷ (maximum value − minimum value)
∗If raw coordinates are 0, the coordinates after data expansion should be 0.

② Coordinates correction after data expansion

(1) If the coordinates are under 224 after data expansion;
Coordinates after correction = coordinates after data expansion + correction value × (1 − (coordinates after data expansion − 224) ÷ 31)
∗31: Because there are 31 points of coordinates position from the value 225 to 255.
∗The effect of correction value declines as the value is going to 255.

(2) If the coordinates are less than or equal to 32 after data expansion;
Coordinates after correction = coordinates after data expansion + (correction value × coordinates after data expansion ÷ 32)
∗32 : Because there are 32 points of coordinates position from the value 0 to 32 (coordinates 0 is not included).
∗The effect of correction value declines as the value is going to 0.

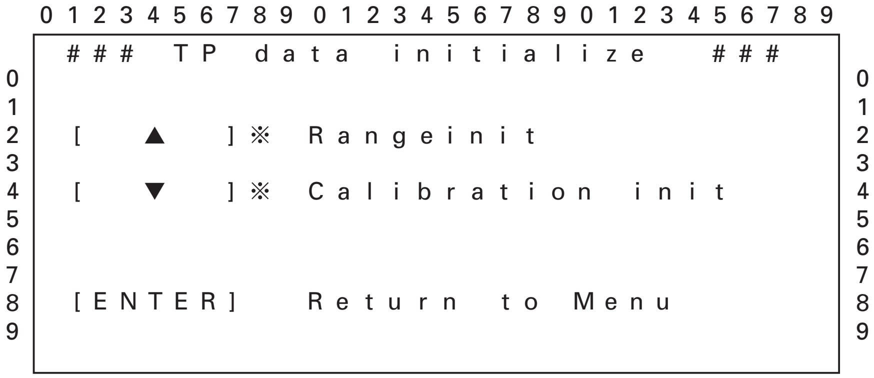
(3) If the coordinates are 33 ~ 224 after data expansion;
Coordinates after correction = coordinates after data expansion + B + (A − B) × (coordinates after data expansion − C) ÷ 64)
∗64 : Because there are 64 points of coordinates position in each area.
∗Add the correction value at the left corner first. Then, the effect of correction value is increasing as going to right.

Coordinates after data	A	B	C
33 ~ 95	Right corner correction data of correction area	Left corner correction data of correction area	Left corner coordinates of correction area
96 ~ 160			
161 ~ 224			

6 INITIALIZATION OF TOUCH PANEL CALIBRATION DATA

6.1 Screen configuration

Return the outermost circumference, 16-point calibration data to default.



```
### TP data initialize ###

[ ▲ ] ※ Rangeinit

[ ▼ ] ※ Calibration init


[ENTER]  Return to Menu
```

The ※ mark indicates that adjustment is finished.
Deleted after initialization.
(initialization = default inside microcomputer)

6.2 Operation specification

up key [▲]	Clearing outermost circumference adjustment value and return it to default
down key [▼]	Clearing 16-point calibration value and return it to default.

Press [ENT] key of main unit or remote control unit to return to TOP MENU.

6.3 Processing detail

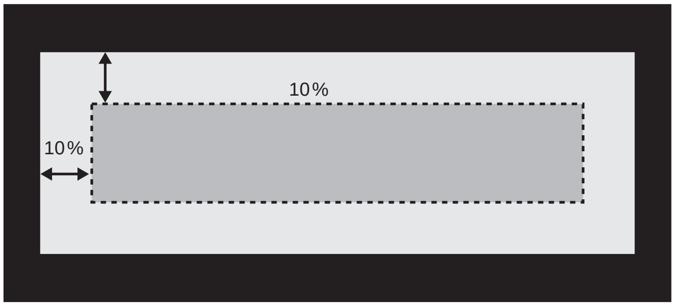
[Initialization processing]
It initializes outermost circumference value and 16-point value.
It writes default of initialized items to EEPROM and clears conditioned flag.

Information About Permissible Error Settings For TPS Touch Panel Audit

Outermost circumference settings

Permissible error of outermost circumference should be 10% of valid zone.

∗10% is calculated by the value determined by the outermost circumference zone as 100.



☐ Settings valid zone (OK)

▨ Settings invalid zone (NG)

Outermost circumference default

		min	max
X	Voltage (V)	0.75	3.21
	digital (AD)	58	248
	dot (OSD)	0	240
	NAVI	0	255
Y	Voltage (V)	0.83	3.12
	digital (AD)	64	241
	dot (OSD)	0	232
	NAVI	0	255
	ref	3.3	(V)

*Default above is measured with to the very limit of frame during measuring outermost circumference value.

Outermost circumference permissible error value

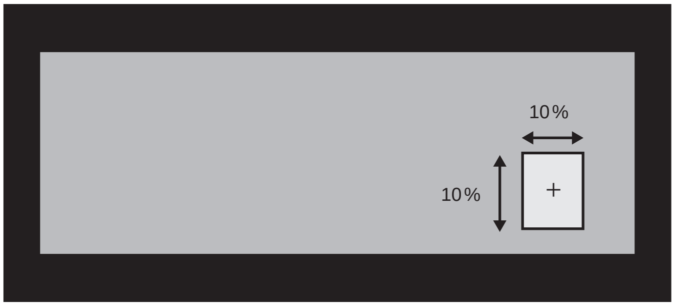
		△	10%
X	Voltage (V)	0.25	
	digital (AD)	19	
	dot (OSD)	24	
	NAVI	26	
Y	Voltage (V)	0.23	
	digital (AD)	18	
	dot (OSD)	23	
	NAVI	26	

Outermost circumference adjustment OK zone

		min	max
X	Minimum permissible value	0	229
	Maximum permissible value	77	255
Y	Minimum permissible value	0	223
	Maximum permissible value	82	255

Calibration

Permissible error of point calibration should be 10%



☐ Settings valid zone (OK)

▨ Settings invalid zone (NG)

Outermost circumference permissible error value

		△	10%
X	Voltage (V)	0.25	
	digital (AD)	19	
	dot (OSD)	24	
	NAVI	26	
Y	Voltage (V)	0.23	
	digital (AD)	18	
	dot (OSD)	23	
	NAVI	26	
ref	3.3 (V)		

7. GENERAL INFORMATION

7.1 DIAGNOSIS

7.1.1 DISASSEMBLY

● Removing the Grille Assy (Fig.1)

Monitor section is drawn out forward.

1 Remove the two screws and then remove the Holder.
Disconnect the connector.

2 Remove the two screws and then remove the Grille Assy.

● Removing the Case

3 Remove the five screws.(Fig.1)

4 Remove the screw.(Fig.1)

5 Remove the two screws and then remove the Case.(Fig.1)

Note) Inside the product there is a flexible substrate that connects the Case and the Bracket.
Be very careful and do not give it a strong pull when removing the Case, otherwise it may be torn.

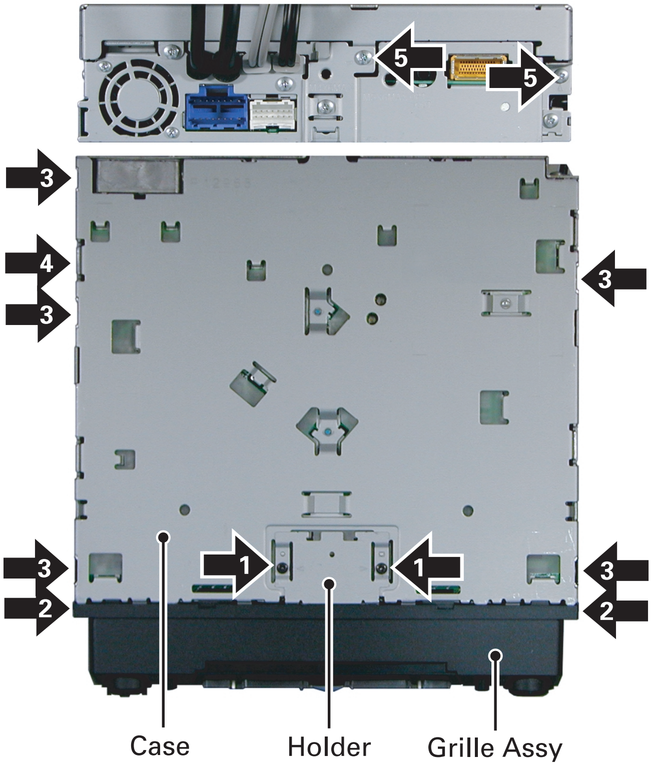


Fig.1

● Removing the DVD Mechanism Module (Fig.2)

1 Remove the four screws.

Disconnect the connector and then remove the DVD Mechanism Module.

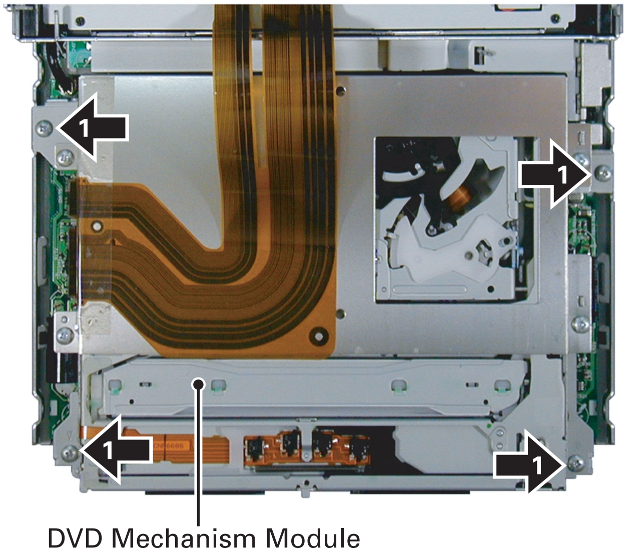


Fig.2

● Removing the Mother Unit (Fig.3)

1 Straighten the tabs at two locations indicated.

2 Remove the two screws and then remove the Holder.

3 Remove the two screws.

Disconnect the connector and then remove the Fan Motor.

4 Remove the two screws.

5 Remove the five screws and then remove the Panel.

6 Straighten the tabs at five locations indicated.

7 Remove the screw and then remove the Mother Unit.

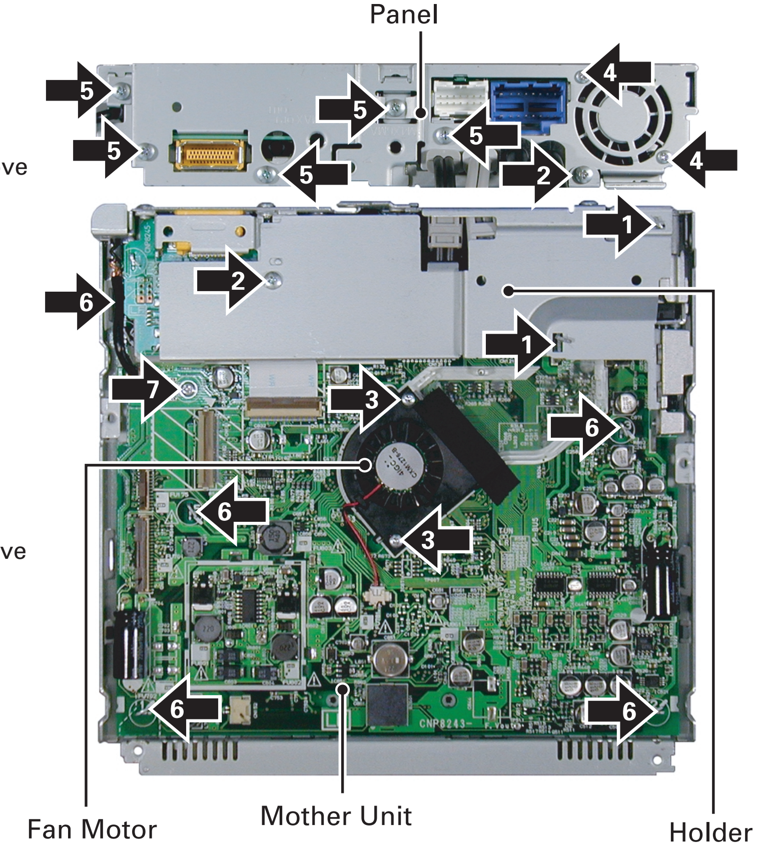

Panel
5
5
5
5
5
4
4
2
1
2
6
1
7
3
6
6
3
6
6
Fan Motor
Mother Unit
Holder

Fig.3

Removing the Case (Fig.4)

1. Remove the two screws and then remove the Lever.
2. Remove the three screws and then remove the Holder.
3. Disconnect the connector.
4. Remove the screw.
5. Remove the five screws and then remove the Case.

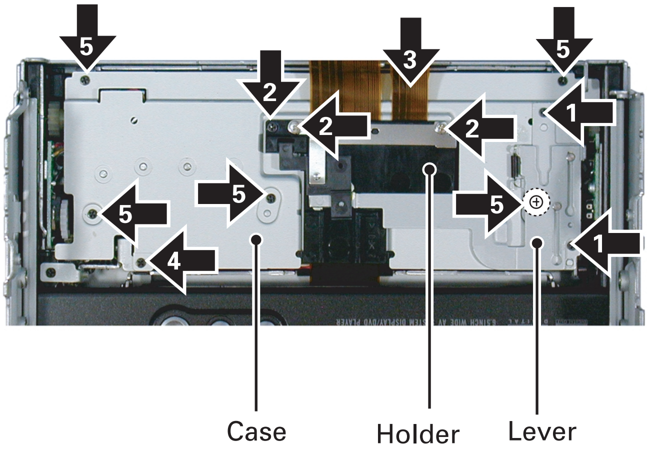

5
5
3
5
2
2
2
1
5
5
5
1
4
Case
Holder
Lever

Fig.4

Removing the Display Assy (Fig.5)

1. Remove the screw.

Disconnect the connector and then remove the Motor Unit.

2. Remove the two screws and then remove the two Holders.
3. Pull out the Display Assy in the arrow indicated direction.

Note) When reassembling, hold the switch down with tweezers or the like and put the Display Assy back to the Chassis. Otherwise, the switch may be damaged and not function properly.

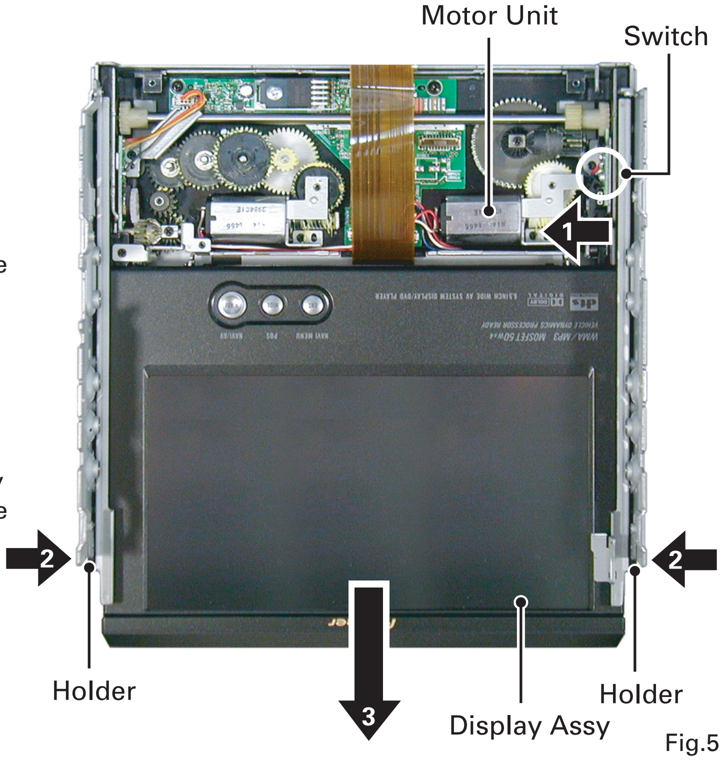

Motor Unit
Switch
1
2
2
3
Holder
Display Assy
Holder

Fig.5

Removing the Main Unit (Fig.6)

1. Remove the screw and then remove the Bracket.
2. Remove the four screws and then remove the Shaft Unit.
3. Remove the three screws.

Disconnect the connector and then remove the Main Unit.

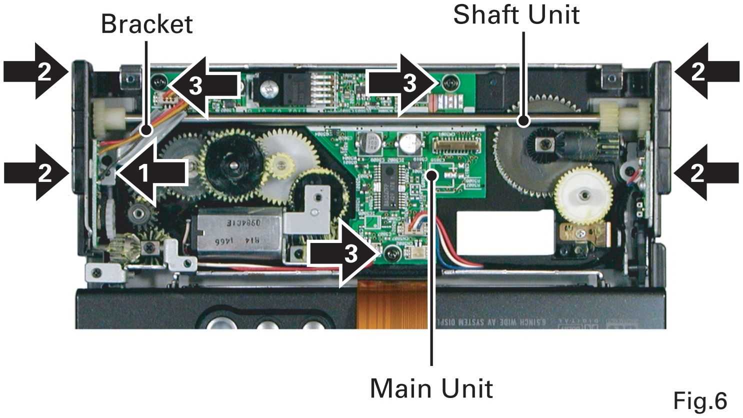

Bracket
Shaft Unit
2
3
3
2
2
1
2
3
Main Unit

Fig.6

● Removing the Display Assy (Fig.7)

1 Remove the two screws and then remove the Holder.

2 Remove the three screws and then remove the Cover Unit.

3 Remove the four screws.

Disconnect the connector and then remove the Display Assy.

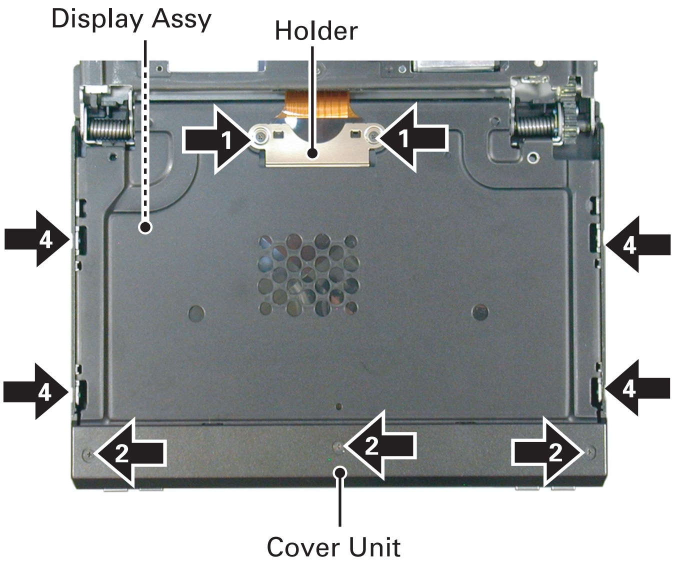

Display Assy
Holder
1
1
4
4
4
4
2
2
2
Cover Unit

Fig.7

● Removing the Monitor PCB (Fig.8)

1 Straighten the tabs at two locations indicated.

2 Remove the three screws.

Disconnect the connector and then remove the Monitor PCB.

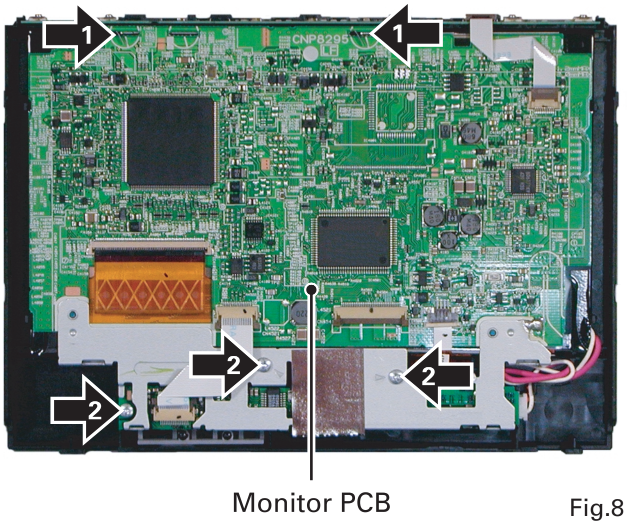
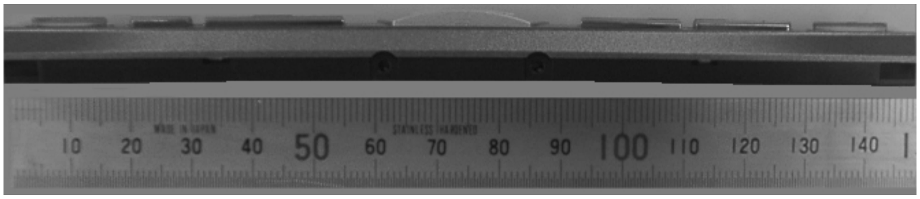
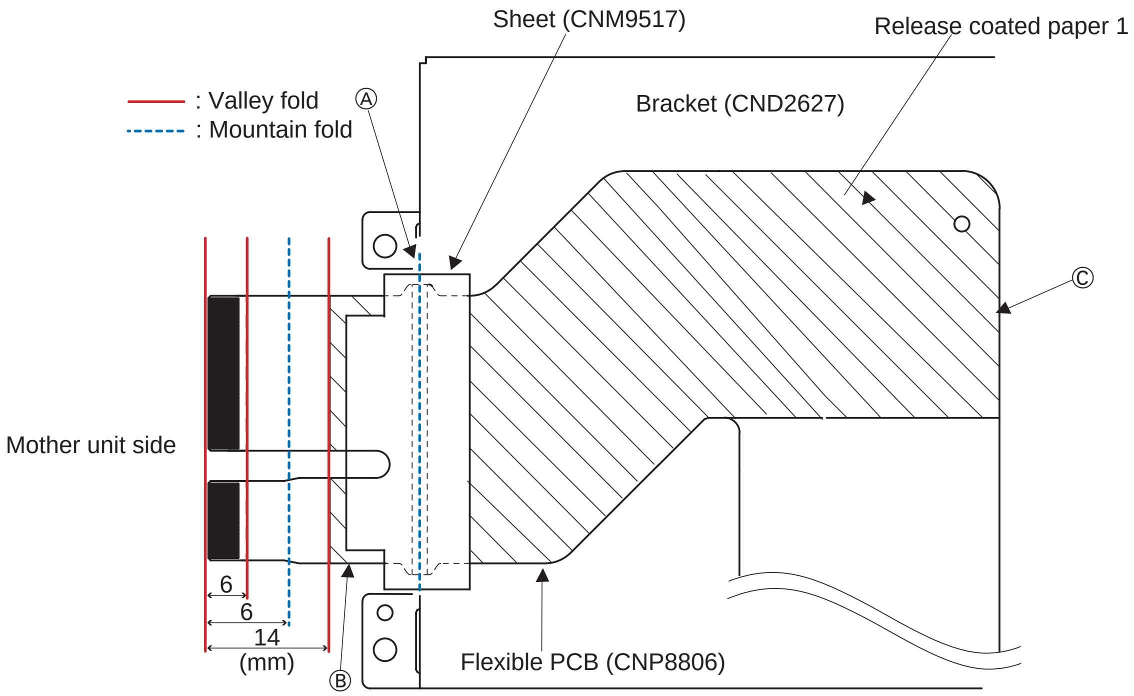

1
1
CNP8295
2
2
2
Monitor PCB

Fig.8

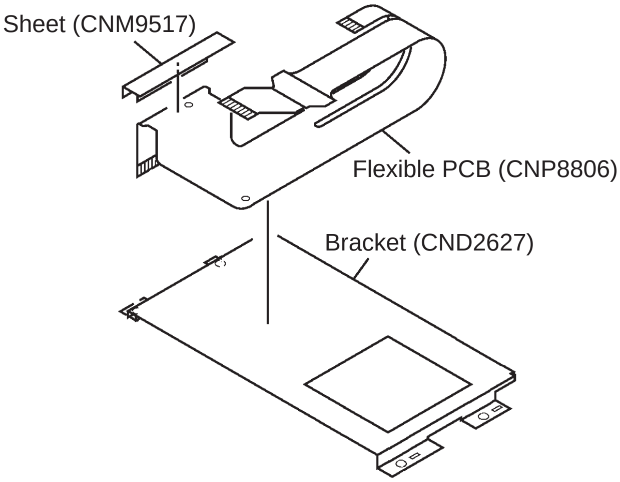
Note:
Tighten the screws with the panel in warped state as shown in the photograph below.
Otherwise, it will be difficult to install Detach Grille Assy to Panel Assy.


10 20 30 40 50 60 70 80 90 100 110 120 130 140

● Exchanging Flexible PCB (CNP8806)

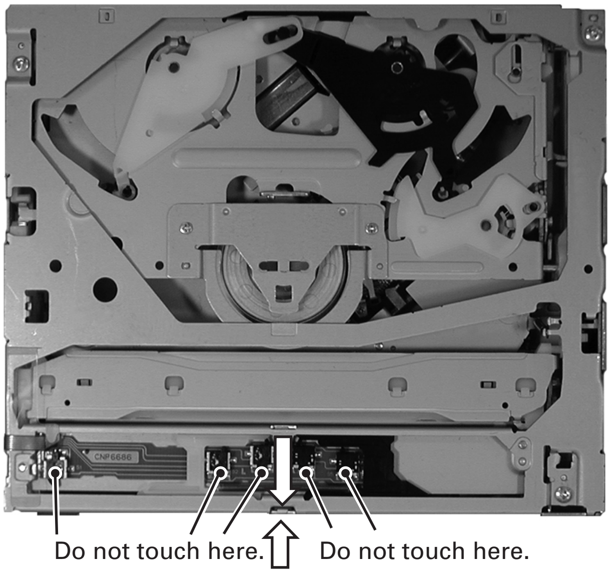

Sheet (CNM9517)
Release coated paper 1
: Valley fold
: Mountain fold
Ⓐ
Bracket (CND2627)
Ⓒ
Mother unit side
6
6
14
(mm)
Ⓑ
Flexible PCB (CNP8806)

1. When exchanging a flexible PCB (CNP8806), fold the PCB as indicated in the upper figure.
2. Connect the mother unit side of the flexible PCB to the connecter of the mother unit.
3. Remove release Ⓑ part of coated paper of the flexible PCB.
4. Paste Ⓐ part of the flexible PCB along the corner of the bracket (CND2627).
3. Paste Ⓒ part of the flexible PCB on the bracket.
5. Paste the sheet (CNM9517) according to Ⓐ part of the flexible PCB.
   If the flexible PCB and the sheet are not contacted at this time, a monitor part will get damaged or a shutter mechanism will get hung up. Make sure that the flexible PCB and the sheet contact a bracket.
   In addition, since adhesive strength becomes weak, do not use again the sheet removed once.


Sheet (CNM9517)
Flexible PCB (CNP8806)
Bracket (CND2627)

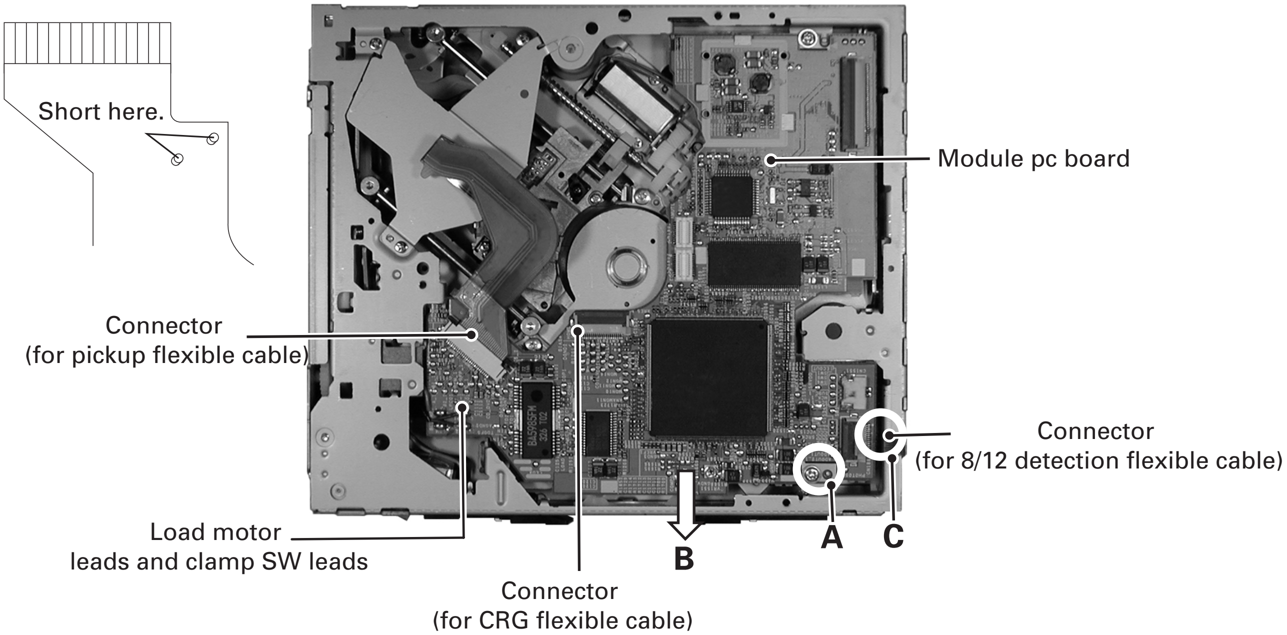
Precautions on handling the mechanism module

1. Hold the upper and main frames.
2. Do not hold the front portion of the upper frame. It is a delicate part.
3. Do not touch the switches on the top panel.
4. Be careful not to catch the flexible cables.


CNP6686
Do not touch here.
Do not touch here.
Do not hold this delicate portion.

Removing the module pc board

1. Set the mechanism to the lock position (disc load standby position).
2. Place the mechanism module upside down.
3. Short the two lands on the pickup flexible cable as shown below.
4. Be sure to disconnect the pickup flexible cable and the CRG flexible cable from the connectors to protect them from damages.
5. Remove solder from the load motor leads and clamp SW leads.
6. Loosen the two fixing screws. Lift the position A of the module pc board lightly and move it in the direction B to remove it. Be careful not to damage the flexible cable C.
7. Disconnect the 8/12 detection flexible-cable from the connector.


Short here.
Module pc board
Connector
(for pickup flexible cable)
Connector
(for 8/12 detection flexible cable)
Load motor
leads and clamp SW leads
B
A
C
Connector
(for CRG flexible cable)

● Removing the pickup unit

1. Remove the module pc board in accordance with the procedure of "Removing the module pc board."
2. While holding the pickup case, remove the skew screw (main).
3. Lifting the end of the pickup rack, slide the main shaft, and remove the pickup unit.

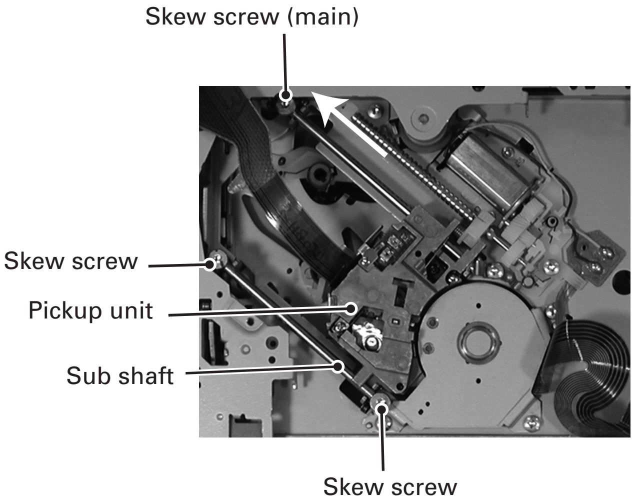
Notes:

Replacing the pickup unit requires the skew adjustment.

Remove glue from both ends of the main and sub shafts, and skew stud.

Do not reuse the old skew screw. Be sure to use a brand-new skew screw supplied with a new pickup unit.

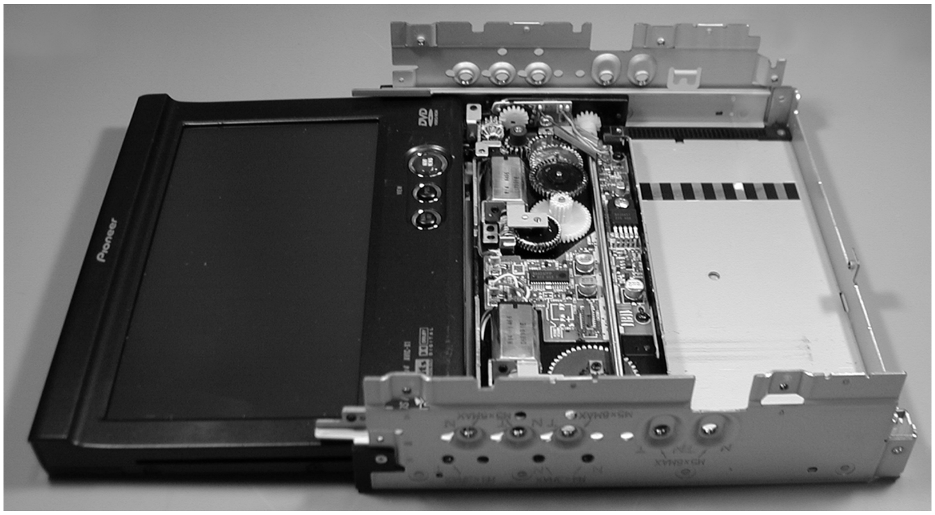
Fix the skew screw with glue (GYL1001) after adjustment.



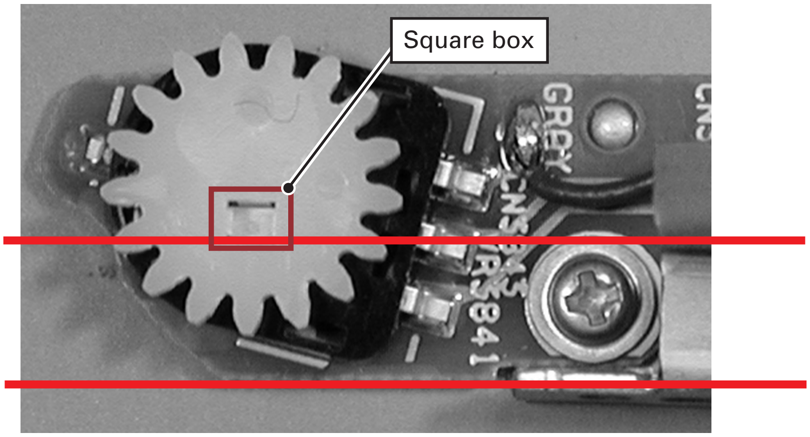
● How to install the Volume Unit fo the Drive Unit

When install the Volume Unit, adjust the positioning of the rotating angle of the gear.

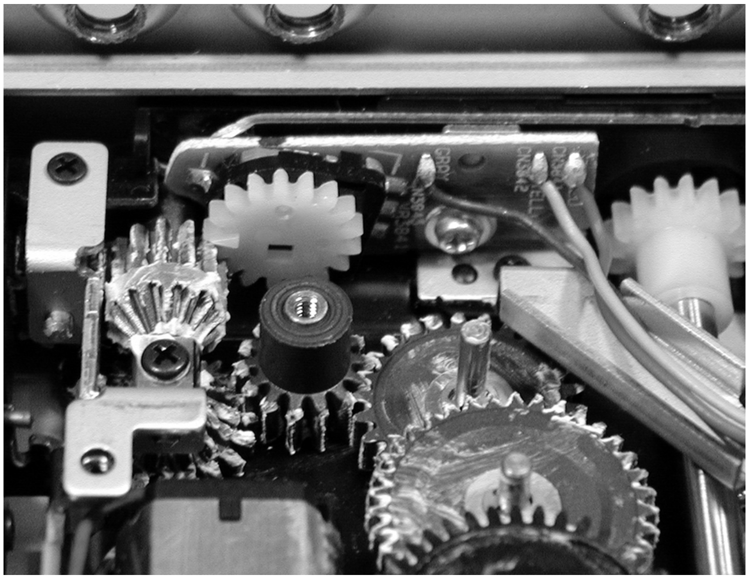
1. Set the Monitor Unit horizontally with the Main Unit of the Drive Unit.



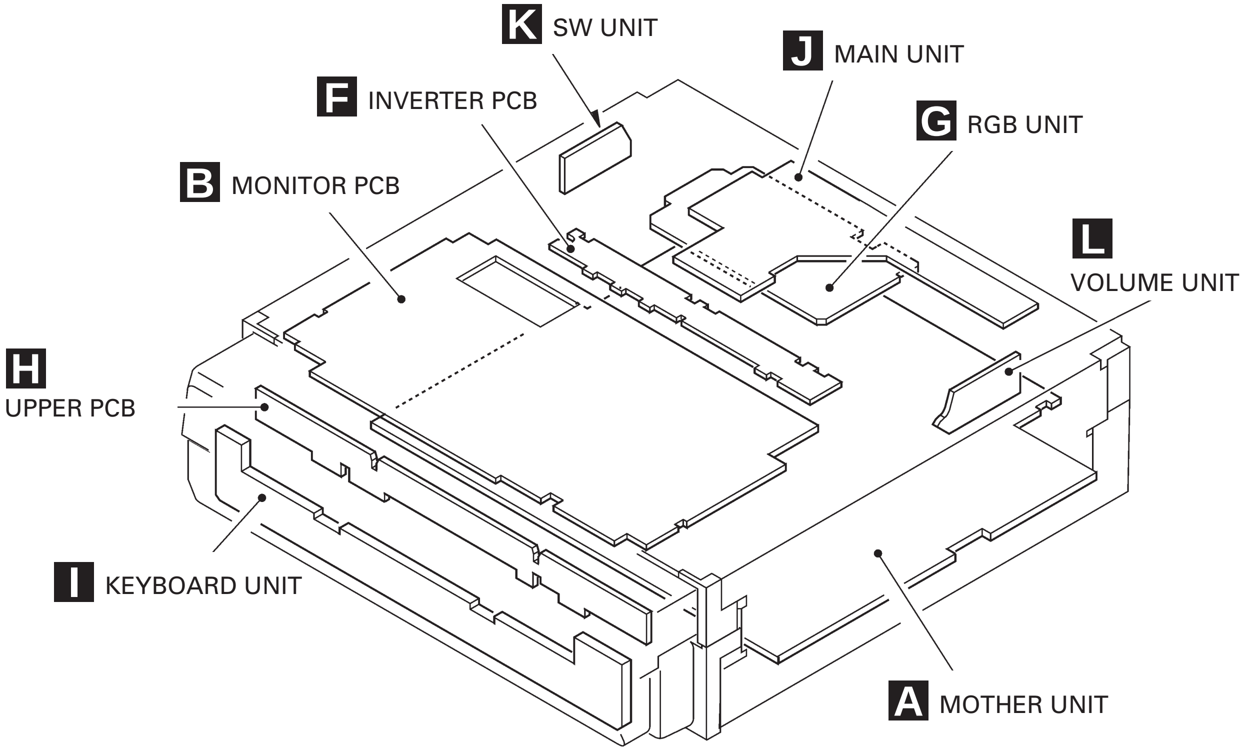
2. When install the gear unit, rotate the gear by hand until the square box of the gear keeps in a horizontal position like the figure below.

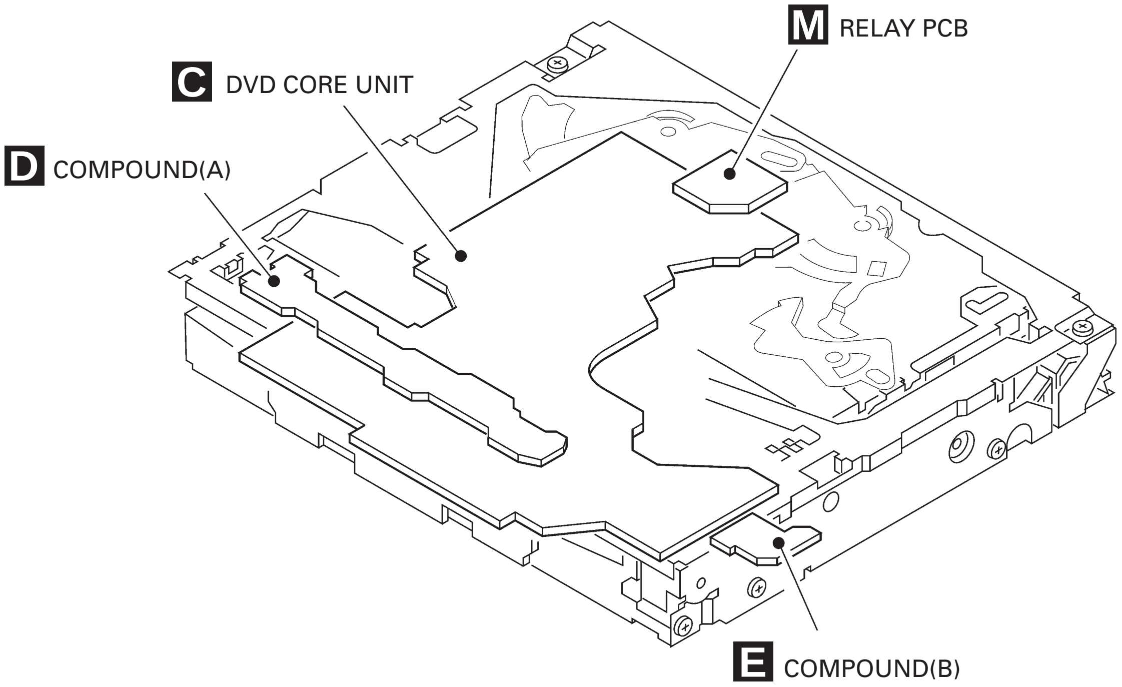


*Gap of one teeth is acceptable.

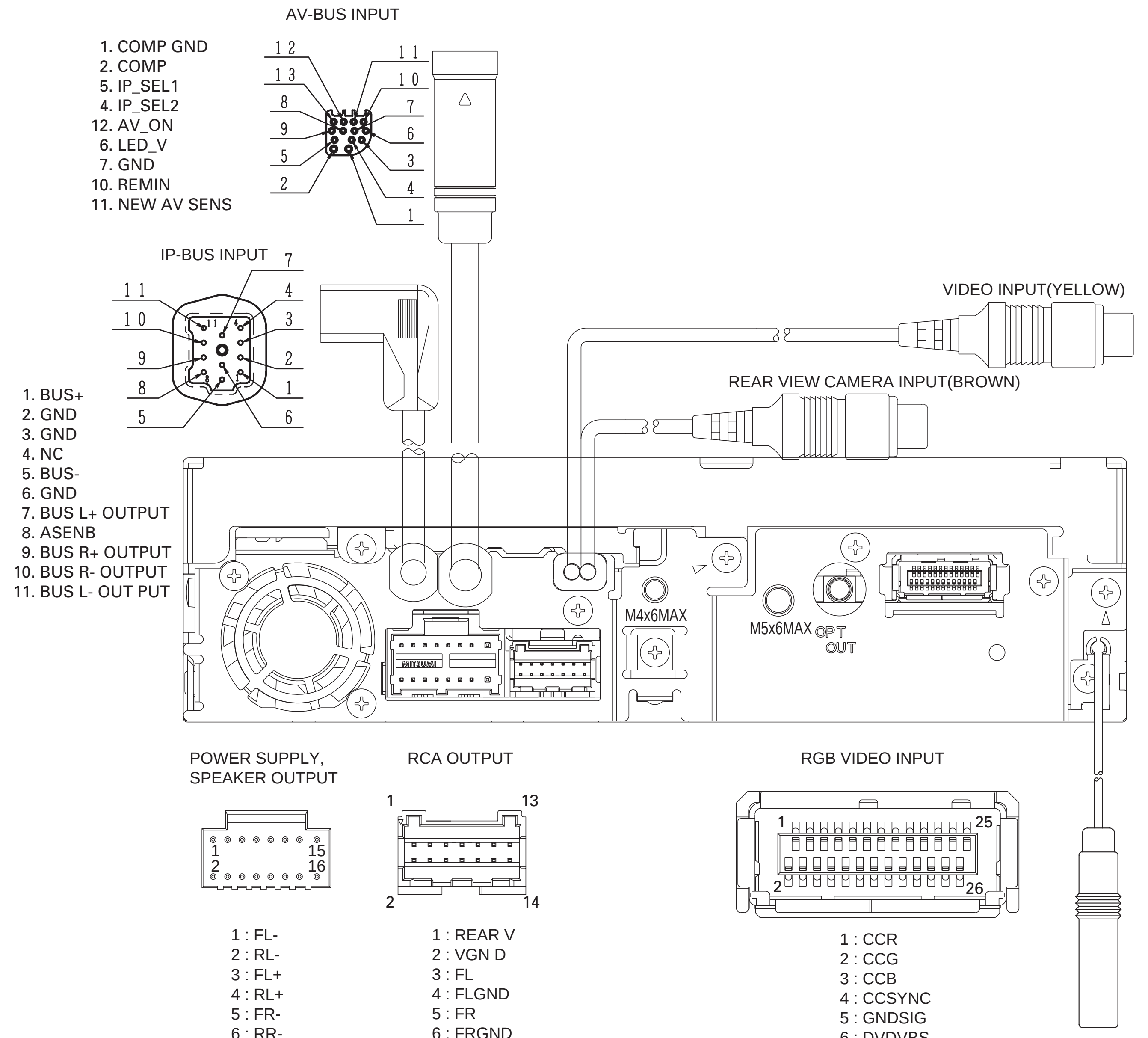


7.1.2 PCB LOCATIONS


K SW UNIT
J MAIN UNIT
F INVERTER PCB
G RGB UNIT
B MONITOR PCB
L VOLUME UNIT
H UPPER PCB
I KEYBOARD UNIT
A MOTHER UNIT


M RELAY PCB
C DVD CORE UNIT
D COMPOUND(A)
E COMPOUND(B)

7.1.3 CONNECTOR FUNCTION DESCRIPTION


AV-BUS INPUT
12
13
8
9
5
2
11
10
7
6
3
4
1
IP-BUS INPUT
11
10
9
8
5
7
4
3
2
1
6
VIDEO INPUT(YELLOW)
REAR VIEW CAMERA INPUT(BROWN)
MITSUMI
M4x6MAX
M5x6MAX
OPT OUT
POWER SUPPLY, SPEAKER OUTPUT
1
2
15
16
RCA OUTPUT
1
13
2
14
RGB VIDEO INPUT
1
25
2
26
FM/AM ANTENNA INPUT

AV-BUS INPUT

1. COMP GND
2. COMP
5. IP_SEL1
4. IP_SEL2
12. AV_ON
6. LED_V
7. GND
10. REMIN
11. NEW AV SENS

IP-BUS INPUT

1. BUS+
2. GND
3. GND
4. NC
5. BUS-
6. GND
7. BUS L+ OUTPUT
8. ASENB
9. BUS R+ OUTPUT
10. BUS R- OUTPUT
11. BUS L- OUT PUT

POWER SUPPLY, SPEAKER OUTPUT

1 : FL-
2 : RL-
3 : FL+
4 : RL+
5 : FR-
6 : RR-
7 : FR+
8 : RR+
9 : P.B.
10 : VGND
11 : ACC
12 : B.REM
13 : ILL
14 : MUTE
15 : B.UP
16 : GND

RCA OUTPUT

1 : REAR V
2 : VGN D
3 : FL
4 : FLGND
5 : FR
6 : FRGND
7 : SWL
8 : SWLGND
9 : SWR
10 : SWRGND
11 : VCRINL
12 : VCRGND
13 : VCRINR
14 : VCRGND

RGB VIDEO INPUT

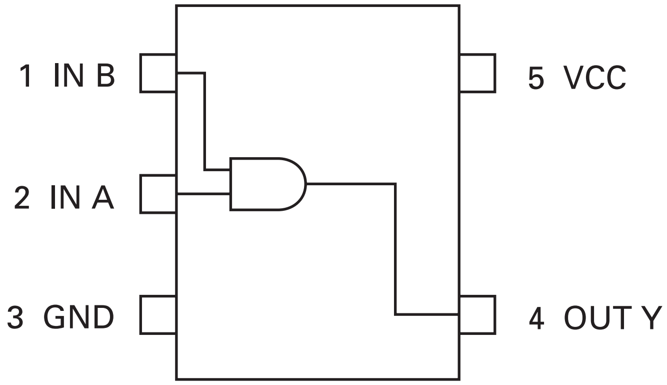
1 : CCR
2 : CCG
3 : CCB
4 : CCSYNC
5 : GNDSIG
6 : DVDVBS
7 : GNDDVD
8 : YS
9 : NC
10 : CCAUL
11 : CCAUR
12 : GNDAU
13 : ONSEI+
14 : ONSEI-
15 : REAUR
16 : REAUL
17 : GNDRAU
18 : CCREM
19 : DSEN
20 : TVON
21 : GION
22 : MONON
23 : VSW5
24 : HTXD
25 : HRXD
26 : GNDD

7.2 IC

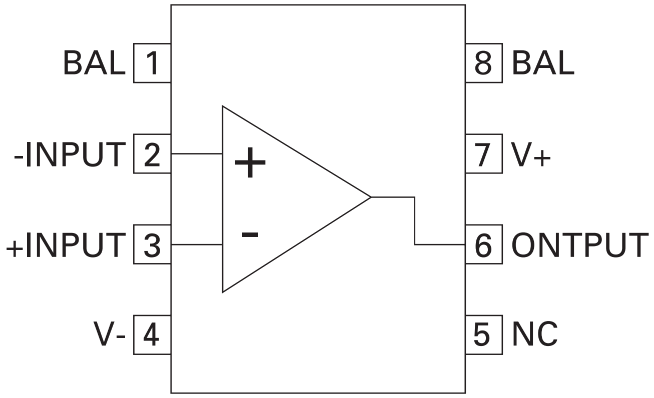
TC7SET08FUS1
TC7SH08FUS1
NJM2136V
S-818A35AUC-BGP
NJM2388F84
TC74VHC08FTS1
PE5485A
TC90A96AFG
TC7SET04FUS1
TC74VHC04FTS1
BD6171KV
S-1131B25UC-N4K
S-1131B15UC-N4A
TC7SH02FUS1
TC7SH32FUS1
S-93C56BD0I-J8
OZ961ISN
PDG087A
K4S283232E-TC75
NJM2140R
TC7WH157FU
R1130H501B
SM8707LV
TC74LCK16373AFT
SM8707LV
TC74LCK16373AFT
PE5401A
PD6516A
S-L2980A50MC-C7J
LTC3411EMS
TC7SZ125FU
MN35104UB

IC's marked by * are MOS type.
Be careful in handling them because they are very liable to be damaged by electrostatic induction.

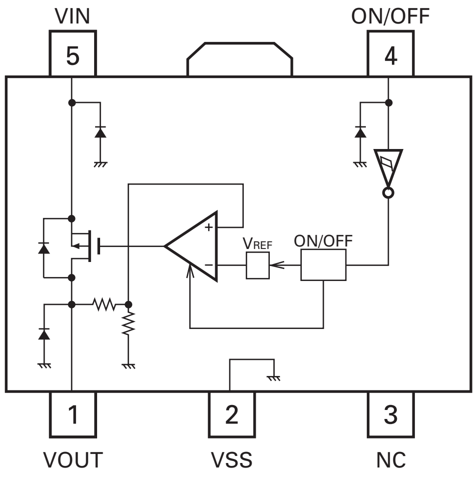
*TC7SET08FUS1,*TC7SH08FUS1


1 IN B
2 IN A
3 GND
5 VCC
4 OUT Y

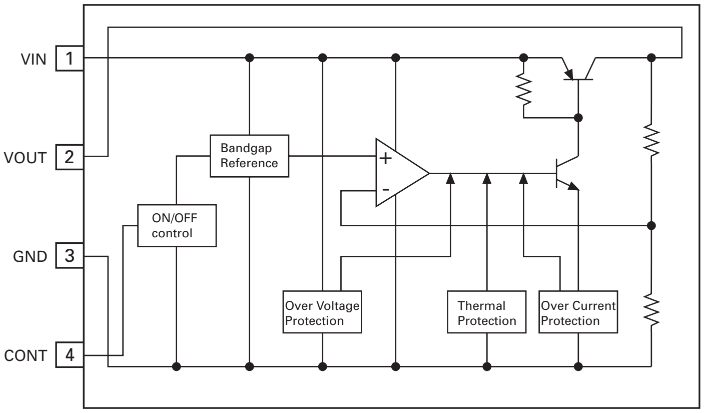
*NJM2136V


BAL 1
-INPUT 2
+INPUT 3
V- 4
8 BAL
7 V+
6 ONTPUT
5 NC
+
-

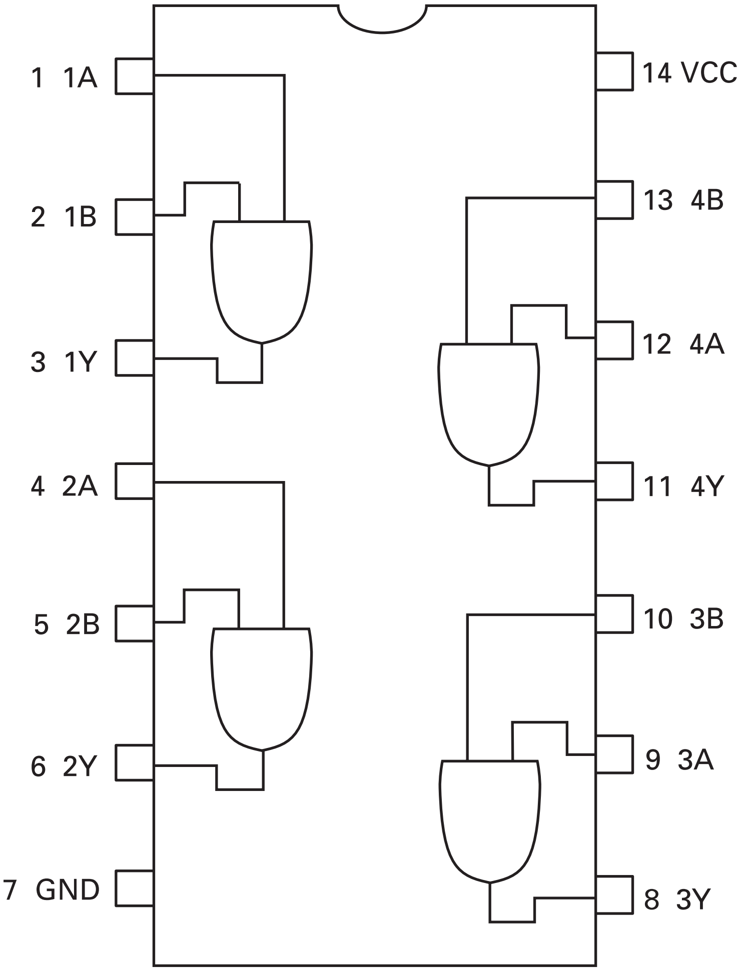
*S-818A35AUC-BGP


VIN
5
ON/OFF
4
VREF
ON/OFF
+
-
1
VOUT
2
VSS
3
NC

NJM2388F84


VIN
1
VOUT
2
GND
3
CONT
4
Bandgap Reference
ON/OFF control
+
-
Over Voltage Protection
Thermal Protection
Over Current Protection

*TC74VHC08FTS1


1 1A
2 1B
3 1Y
4 2A
5 2B
6 2Y
7 GND
14 VCC
13 4B
12 4A
11 4Y
10 3B
9 3A
8 3Y

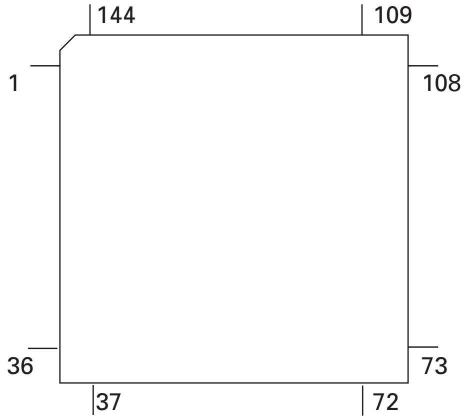
●Pin Function(PE5485A)

Pin No.	Pin Name	I/O	Function and operation
1	NC		Not used
2,3	MODEL0,1	I	Model select input
4	NC		Not used
5	PORTGND0		Port GND
6	ROMCS	O	ROM Chip select output
7	ROMCLK	O	ROM Clock output
8	ROMDATA	I/O	ROM Data Input/output
9	VDT	O	Electronic volume:Data output
10	VCK	O	Electronic volume:Clock output
11	FRONTMUTE	O	Front Mute output
12	VST	O	Electronic volume:Strobe output
13	MTRPW	O	FLAP Motor power supply control output
14	MTRSEL	O	FLAP motor control output
15	MTRS	O	FLAP Motor speed contorl output
16	MTR1	O	FLAP angle motor control signal output
17	MTR2	O	FLAP position motor control signal
18	SNSPW	O	FLAP sense power supply output
19	PUSHSW	I	FLAP LIFE sense switch input
20	DEGOSW	I	FLAP monitor angle 0 sense input
21	LIFTPUL	I	FLAP lift pulse input
22	PORTVDD0		Port power supply
23-25	NC		Not used
26	RECIVE	O	Not used
27,28	NC		Not used
29	ACCPW		ACC power control output
30	AMPPW	O	Amp power control output
31	SYSPW	O	
32	VPW	O	Video power control output
33	DDCCNTL	O	DC/DC converter control output
34	DLED	O	Anti-theft LED output
35	ILMGRN	O	Green illumination output
36	PCL	O	System clock ouptut
37	GND0		GND
38	CPUREG		Filter capacitor connected
39	VDD0		Power supply
40	$\overline{\text{RESET}}$	I	System reset input
41	VPP		Power supply for frash ROM
42	TSI	I	Test data input
43	NC		Not used
44	TCK	I	Test data clock input
45	NC		Not used
46	TUNPDI	I	TUNER PLL data input
47	TUNPDO	I/O	TUNER PLL data input/output
48	TUNPCK	I/O	TUNER PLL clock input/output
49	NC		Not used
50	RCAMUTE	O	RCA REAR mute output
51,52	VSELIN1,2	I	VSEL input
53	AVONIN	I	AV-BUS AV video sense input
54,55	NC		Not used
56	TESTIN	I	Test mode input
57	NC		Not used
58	PRGON	I	System microcomputer program mode input
59	VPPON	O	VPP ON/OFF output
60	PORTVDD1		Port power supply

Pin No.	Pin Name	I/O	Function and operation
61	PRGSW	I	System microcomputer programing mode input
62	PRGRST	O	Display microcomputer programing mode reset output
63-65	NC		Not used
66	CILM	O	Flap illumination output
67	NC		Not used
68	BEEP	O	BEEP output
69	$\overline{\text{BSENS}}$	I	Backup sense input
70,71	XT2,1		Sub clock oscillator connect
72	GND2		GND
73,74	X1,2		Main clock oscillator connect
75,76	NC		Not used
77,78	COOLCNT1,2	O	Fan control output1,2
79,80	NC		Not used
81	CONTBIN	I	Backup off intput
82	NC		Notused
83	$\overline{\text{DSENS}}$	I	Detach sense intput
84	SDA	I/O	AVselector data input/output
85	NC		Not used
86	SCL	O	AV selector clock output
87	ASENBO	O	Slave ACC sense output
88	IPPW	O	IPBUS driver power supply contorl output
89	NC		Not used
90	$\overline{\text{IERX}}$	I	IPBUS data input
91	$\overline{\text{IETX}}$	O	IPBUS data output
92	PORTGND1		Port GND
93-95	NC		Not used
96	$\overline{\text{ASENS}}$	I	ACC sense input
97-99	NC		Not used
100	TUNPCE	O	TUNER PLL chip enable output
101	$\overline{\text{TUNPCE2}}$	O	TUNER PLL chip enable output 2
102	PORTVDD2		Port power supply
103	CONTVDD	O	DVD Mechanism modul digital power control output
104	CONTVD8	O	DVD Mechanism modul motor power control output
105	DREM	O	NAVI Reboot remote control output
106	REMUTE	O	NAVI remote control mute output
107	RXMOM	I	Display microcomputer data input
108	TXMON	O	Display microcomputer data output
109	SWVDD	O	Display microcomputer power supply output
110	NC		Not used
111	RXMS3	I	DVD Mechanism modul data input
112	TXMS3	O	DVD Mechanism modul data output
113	IRQPWR	O	DVD Mechanism modul backup power output
114	$\overline{\text{XRESET}}$	O	DVD Mechanism modul mechanism CPU reset output
115,116	NC		Not used
117	RXNAV	I	NAVI data input
118	TXNAV	O	NAVI command output
119	$\overline{\text{RGBARI}}$	I	RGB navigation ON sense input
120	NC		Not used
121	NMIXCNT	O	Voice guide mute output
122	MUTE	O	Mute output
123	NC		Not used
124	AMPMUTE	O	AMP mute output
125,126	NC		Not used
127	TELIN	I	TEL mute input
128	VDD1		Power supply
129	PBSENS	I	Packing brake sense input
130	BGSENS	I	Back gear sense input

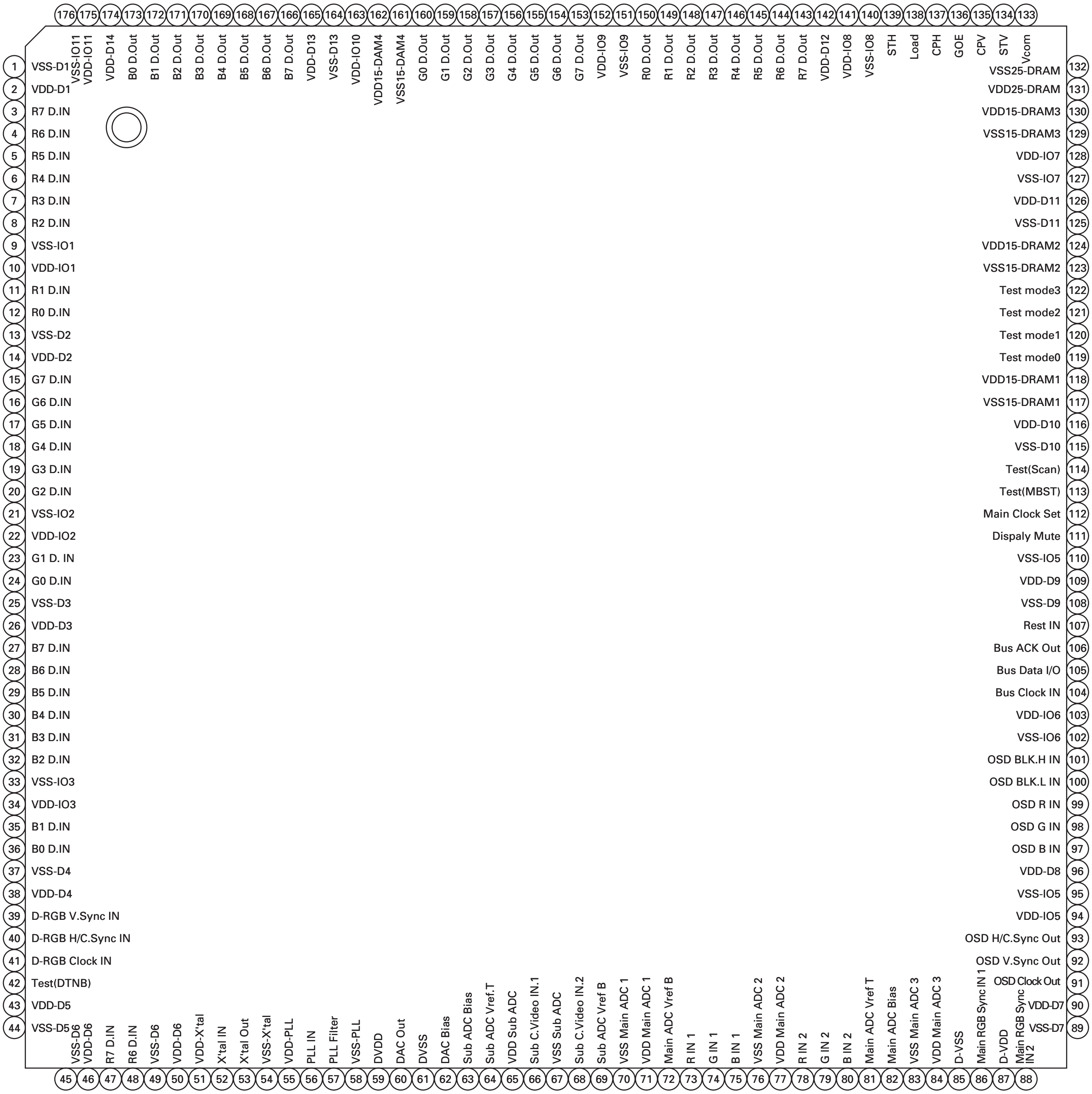
Pin No.	Pin Name	I/O	Function and operation
131	GND1		GND
132-134	NC		Not used
135	TUNSL	I	TUNER signal level input
136	NC		Not used
137	ANGLEIN	I	Mechanism volume for angle sense input
138,139	NC		Not used
140-142	KEYDTA0-2	I	Key data input0-2
143	ADCVDD		A/D Power supply
144	ADCGND		A/D GND

*PE5485A



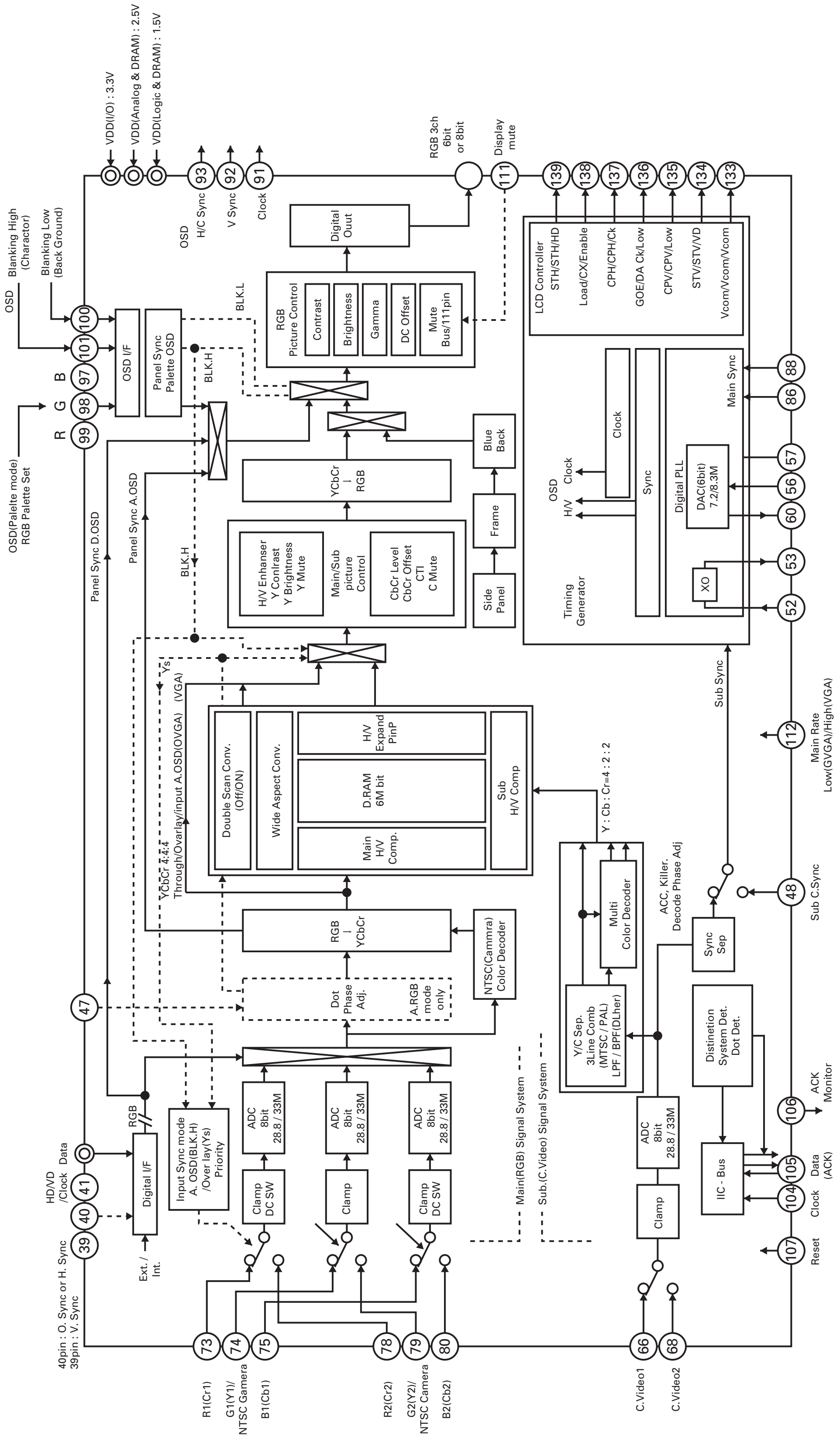
TC90A96AFG

● Pin Layout

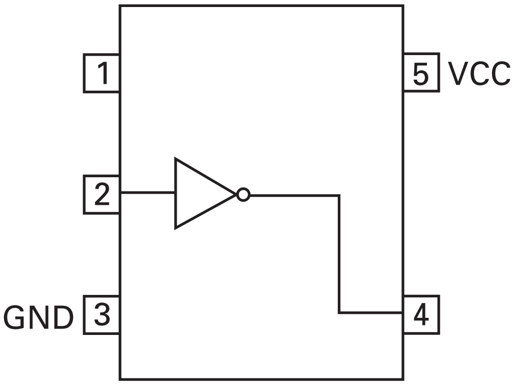

1 VSS-D1
2 VDD-D1
3 R7 D.IN
4 R6 D.IN
5 R5 D.IN
6 R4 D.IN
7 R3 D.IN
8 R2 D.IN
9 VSS-IO1
10 VDD-IO1
11 R1 D.IN
12 R0 D.IN
13 VSS-D2
14 VDD-D2
15 G7 D.IN
16 G6 D.IN
17 G5 D.IN
18 G4 D.IN
19 G3 D.IN
20 G2 D.IN
21 VSS-IO2
22 VDD-IO2
23 G1 D. IN
24 G0 D.IN
25 VSS-D3
26 VDD-D3
27 B7 D.IN
28 B6 D.IN
29 B5 D.IN
30 B4 D.IN
31 B3 D.IN
32 B2 D.IN
33 VSS-IO3
34 VDD-IO3
35 B1 D.IN
36 B0 D.IN
37 VSS-D4
38 VDD-D4
39 D-RGB V.Sync IN
40 D-RGB H/C.Sync IN
41 D-RGB Clock IN
42 Test(DTNB)
43 VDD-D5
44 VSS-D5
45 VSS-D6
46 VDD-D6
47 R7 D.IN
48 R6 D.IN
49 VSS-D6
50 VDD-D6
51 VDD-X'tal
52 X'tal IN
53 X'tal Out
54 VSS-X'tal
55 VDD-PLL
56 PLL IN
57 PLL Filter
58 VSS-PLL
59 DVDD
60 DAC Out
61 DVSS
62 DAC Bias
63 Sub ADC Bias
64 Sub ADC Vref.T
65 VDD Sub ADC
66 Sub C.Video IN.1
67 VSS Sub ADC
68 Sub C.Video IN.2
69 Sub ADC Vref B
70 VSS Main ADC 1
71 VDD Main ADC 1
72 Main ADC Vref B
73 R IN 1
74 G IN 1
75 B IN 1
76 VSS Main ADC 2
77 VDD Main ADC 2
78 R IN 2
79 G IN 2
80 B IN 2
81 Main ADC Vref T
82 Main ADC Bias
83 VSS Main ADC 3
84 VDD Main ADC 3
85 D-VSS
86 Main RGB Sync IN 1
87 D-VDD
88 Main RGB Sync IN 2
89 VSS-D7
90 VDD-D7
91 OSD Clock Out
92 OSD V.Sync Out
93 OSD H/C.Sync Out
94 VDD-IO5
95 VSS-IO5
96 VDD-D8
97 OSD B IN
98 OSD G IN
99 OSD R IN
100 OSD BLK.L IN
101 OSD BLK.H IN
102 VSS-IO6
103 VDD-IO6
104 Bus Clock IN
105 Bus Data I/O
106 Bus ACK Out
107 Rest IN
108 VSS-D9
109 VDD-D9
110 VSS-IO5
111 Dispaly Mute
112 Main Clock Set
113 Test(MBST)
114 Test(Scan)
115 VSS-D10
116 VDD-D10
117 VSS15-DRAM1
118 VDD15-DRAM1
119 Test mode0
120 Test mode1
121 Test mode2
122 Test mode3
123 VSS15-DRAM2
124 VDD15-DRAM2
125 VSS-D11
126 VDD-D11
127 VSS-IO7
128 VDD-IO7
129 VSS15-DRAM3
130 VDD15-DRAM3
131 VDD25-DRAM
132 VSS25-DRAM
133 Vcom
134 STV
135 CPV
136 GOE
137 CPH
138 Load
139 STH
140 VSS-IO8
141 VDD-IO8
142 VDD-D12
143 R7 D.Out
144 R6 D.Out
145 R5 D.Out
146 R4 D.Out
147 R3 D.Out
148 R2 D.Out
149 R1 D.Out
150 R0 D.Out
151 VSS-IO9
152 VDD-IO9
153 G7 D.Out
154 G6 D.Out
155 G5 D.Out
156 G4 D.Out
157 G3 D.Out
158 G2 D.Out
159 G1 D.Out
160 G0 D.Out
161 VSS15-DAM4
162 VDD15-DAM4
163 VDD-IO10
164 VSS-D13
165 VDD-D13
166 B7 D.Out
167 B6 D.Out
168 B5 D.Out
169 B4 D.Out
170 B3 D.Out
171 B2 D.Out
172 B1 D.Out
173 B0 D.Out
174 VDD-D14
175 VDD-IO11
176 VSS-IO11

TC90A96AFG

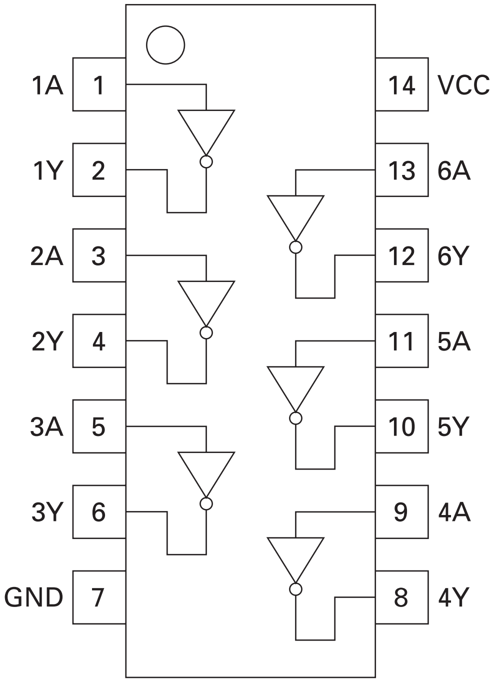
● Block Diagram


VDD(I/O) : 3.3V
VDD(Analog & DRAM) : 2.5V
VDD(Logic & DRAM) : 1.5V
93 H/C Sync
92 V Sync
91 Clock
OSD
RGB 3ch 6bit or 8bit
Display mute
111
139 STH/STH/HD
138 Load/CX/Enable
137 CPH/CPH/Ck
136 GOE/DA Ck/Low
135 CPV/CPV/Low
134 STV/STV/VD
133 Vcom/Vcom/Vcom
LCD Controller
Digital Ouut
RGB Picture Control
Contrast
Brightness
Gamma
DC Offset
Mute Bus/111pin
BLK.L
BLK.H
OSD
Blanking High (Charactor)
Blanking Low (Back Ground)
100
101
97 B
98 G
99 R
OSD(Palette mode) RGB Palette Set
OSD I/F
Panel Sync Palette OSD
Panel Sync D.OSD
Panel Sync A.OSD
YCbCr → RGB
Blue Back
Frame
Side Panel
H/V Enhanser Y Conlrast Y Brightness Y Mute
Main/Sub picture Control
CbCr Level CbCr Offset CTI C Mute
Clock
Sync
Digital PLL
DAC(6bit) 7.2/8.3M
XO
OSD Clock
H/V
Timing Generator
Main Sync
88
86
57
56
60
53
52
Sub Sync
112 Main Rate Low(GVGA)/High(VGA)
Ys
(VGA)
YCbCr 4:4:4 Through/Ovarlay/input A.OSD(OVGA)
Double Scan Conv. (Off/ON)
Wide Aspect Conv.
H/V Expand PinP
D.RAM 6M bit
Main H/V Comp.
Sub H/V Comp
Y : Cb : Cr=4 : 2 : 2
ACC, Killer, Decode Phase Adj
Multi Color Decoder
Y/C Sep. 3Line Comb (MTSC / PAL) LPF / BPF(DLher)
48 Sub C.Sync
Sync Sep
RGB → YCbCr
NTSC(Cammra) Color Decoder
47
Dot Phase Adj.
A.RGB mode only
Distinetion System Det. Dot Det.
106 ACK Monitor
IIC - Bus
105 Data (ACK)
104 Clock
107 Reset
RGB
Data
HD/VD /Clock
41
40
39
Digital I/F
Input Sync mode A. OSD(BLK.H) /Over lay(Ys) Priority
ADC 8bit 28.8 / 33M
ADC 8bit 28.8 / 33M
ADC 8bit 28.8 / 33M
ADC 8bit 28.8 / 33M
Clamp DC SW
Clamp
Clamp DC SW
Clamp
Main(RGB) Signal System
Sub.(C.Video) Signal System
Ext. / Int.
40pin : O. Sync or H. Sync
39pin : V. Sync
73 R1(Cr1)
74 G1(Y1)/ NTSC Gamera
75 B1(Cb1)
78 R2(Cr2)
79 G2(Y2)/ NTSC Camera
80 B2(Cb2)
66 C.Video1
68 C.Video2

TC7SET04FUS1

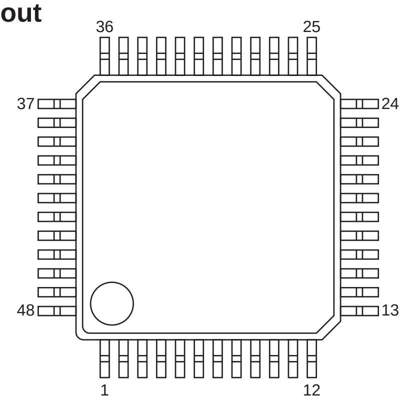

1
2
GND 3
5 VCC
4

*TC74VHC04FTS1


1A 1
1Y 2
2A 3
2Y 4
3A 5
3Y 6
GND 7
14 VCC
13 6A
12 6Y
11 5A
10 5Y
9 4A
8 4Y

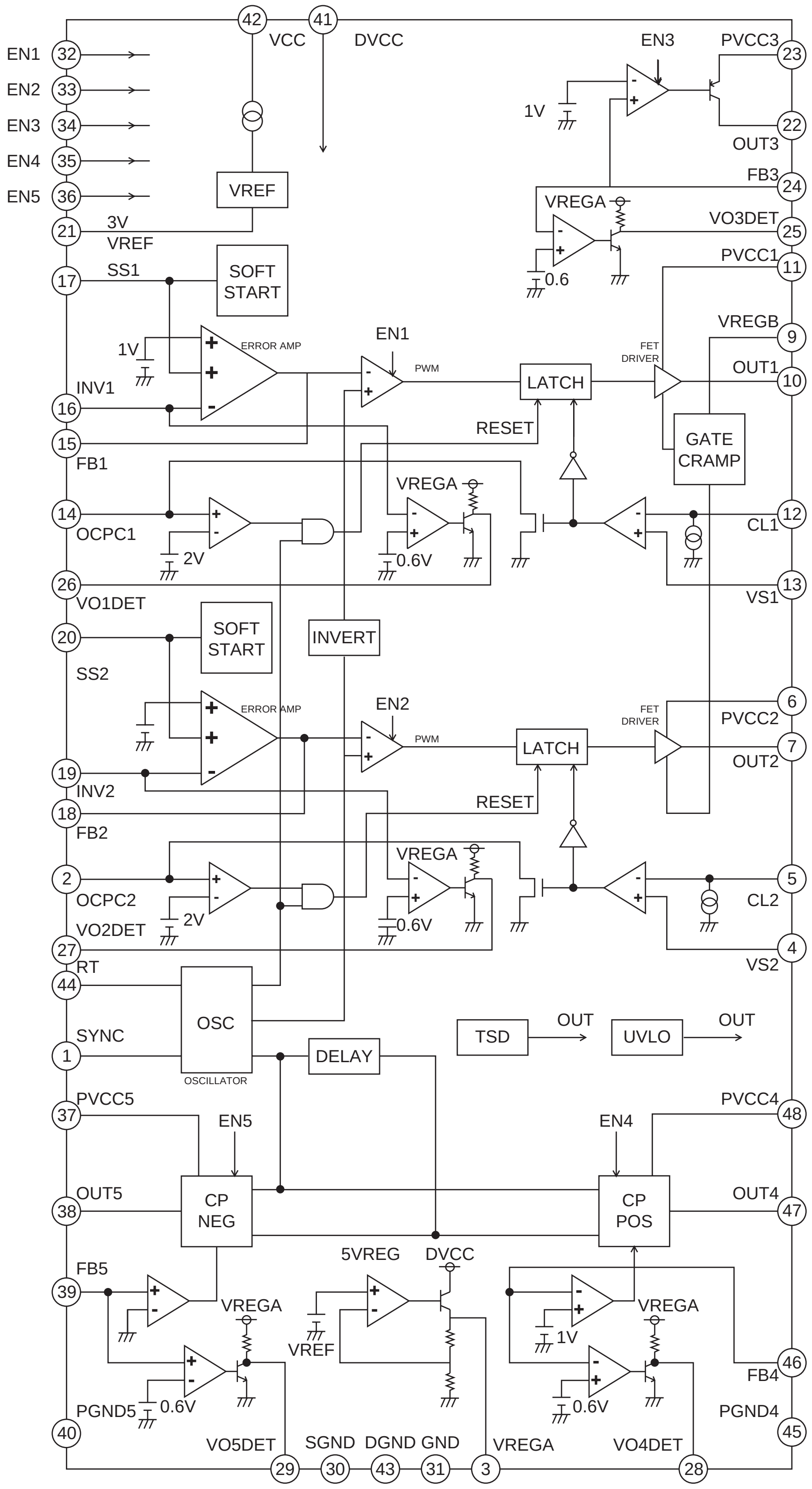
BD6171KV

● Pin Layout

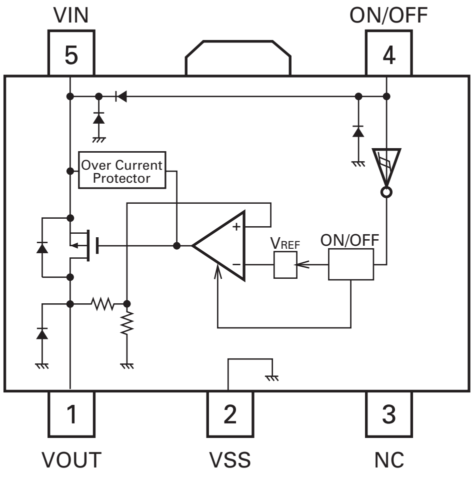

36
25
37
24
48
13
1
12

BD6171KV

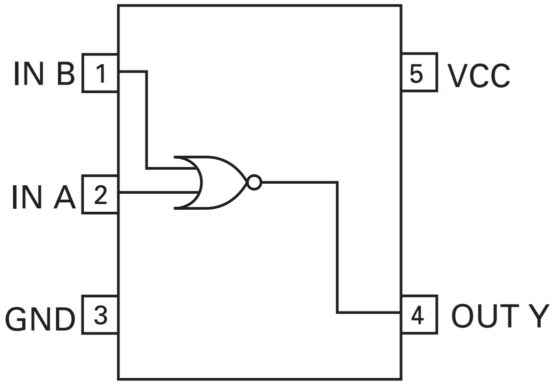
● Block Diagram


42
41
VCC
DVCC
EN3
PVCC3
23
EN1 32
EN2 33
EN3 34
EN4 35
EN5 36
1V
22
OUT3
FB3
24
VREF
VREGA
VO3DET
25
21
3V
VREF
0.6
PVCC1
11
17
SS1
SOFT START
1V
ERROR AMP
EN1
VREGB
9
PWM
LATCH
FET DRIVER
OUT1
10
INV1
16
RESET
15
FB1
GATE CRAMP
VREGA
14
OCPC1
2V
0.6V
CL1
12
26
VO1DET
13
VS1
20
SOFT START
INVERT
SS2
ERROR AMP
EN2
6
FET DRIVER
PVCC2
PWM
LATCH
7
OUT2
19
INV2
18
FB2
RESET
VREGA
2
OCPC2
2V
0.6V
5
CL2
VO2DET
27
RT
4
VS2
44
OSC
SYNC
TSD
OUT
UVLO
OUT
1
DELAY
OSCILLATOR
PVCC5
37
EN5
EN4
PVCC4
48
OUT5
38
CP NEG
CP POS
OUT4
47
FB5
5VREG
DVCC
39
VREGA
VREF
1V
VREGA
46
FB4
PGND5
0.6V
0.6V
PGND4
40
45
VO5DET
SGND
DGND
GND
VREGA
VO4DET
29
30
43
31
3
28

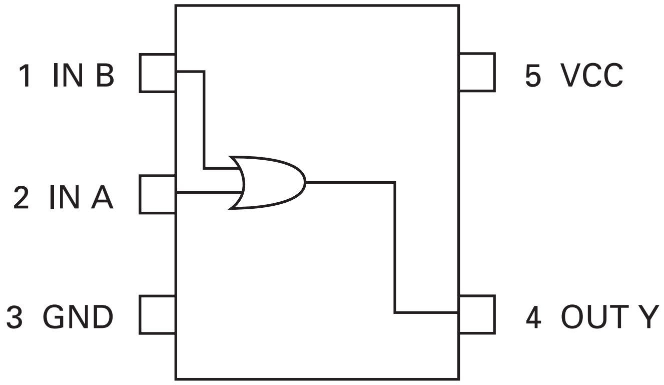
S-1131B25UC-N4K
S-1131B15UC-N4A


VIN
ON/OFF
5
4
Over Current Protector
VREF
ON/OFF
+
−
1
2
3
VOUT
VSS
NC

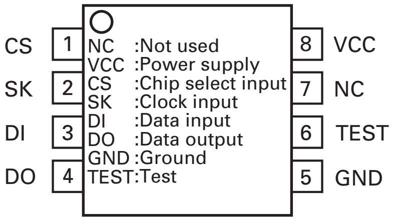
*TC7SH02FUS1


IN B 1
IN A 2
GND 3
5 VCC
4 OUT Y

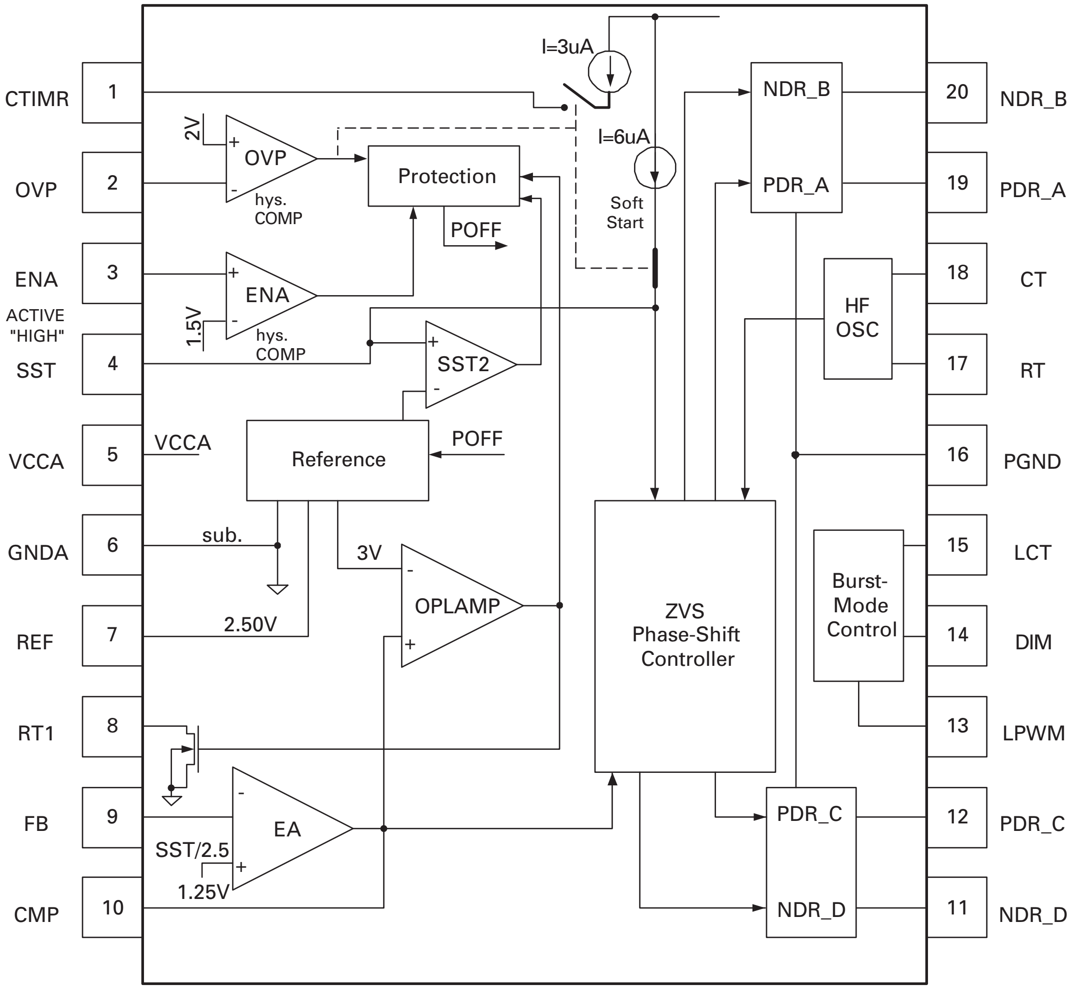
*TC7SH32FUS1


1 IN B
2 IN A
3 GND
5 VCC
4 OUT Y

*S-93C56BD0I-J8


CS 1
SK 2
DI 3
DO 4
8 VCC
7 NC
6 TEST
5 GND
NC :Not used
VCC :Power supply
CS :Chip select input
SK :Clock input
DI :Data input
DO :Data output
GND :Ground
TEST:Test

OZ961ISN

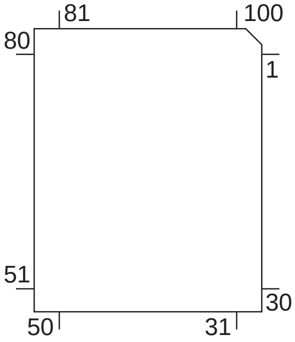

CTIMR
1
OVP
2
ENA
3
ACTIVE
"HIGH"
SST
4
VCCA
5
GNDA
6
REF
7
RT1
8
FB
9
CMP
10
I=3uA
I=6uA
Soft
Start
2V
OVP
hys.
COMP
Protection
POFF
ENA
1.5V
hys.
COMP
SST2
VCCA
Reference
POFF
sub.
3V
OPLAMP
2.50V
EA
SST/2.5
1.25V
NDR_B
PDR_A
HF
OSC
ZVS
Phase-Shift
Controller
Burst-
Mode
Control
PDR_C
NDR_D
20
NDR_B
19
PDR_A
18
CT
17
RT
16
PGND
15
LCT
14
DIM
13
LPWM
12
PDR_C
11
NDR_D

● Pin Functions (PEG087A)

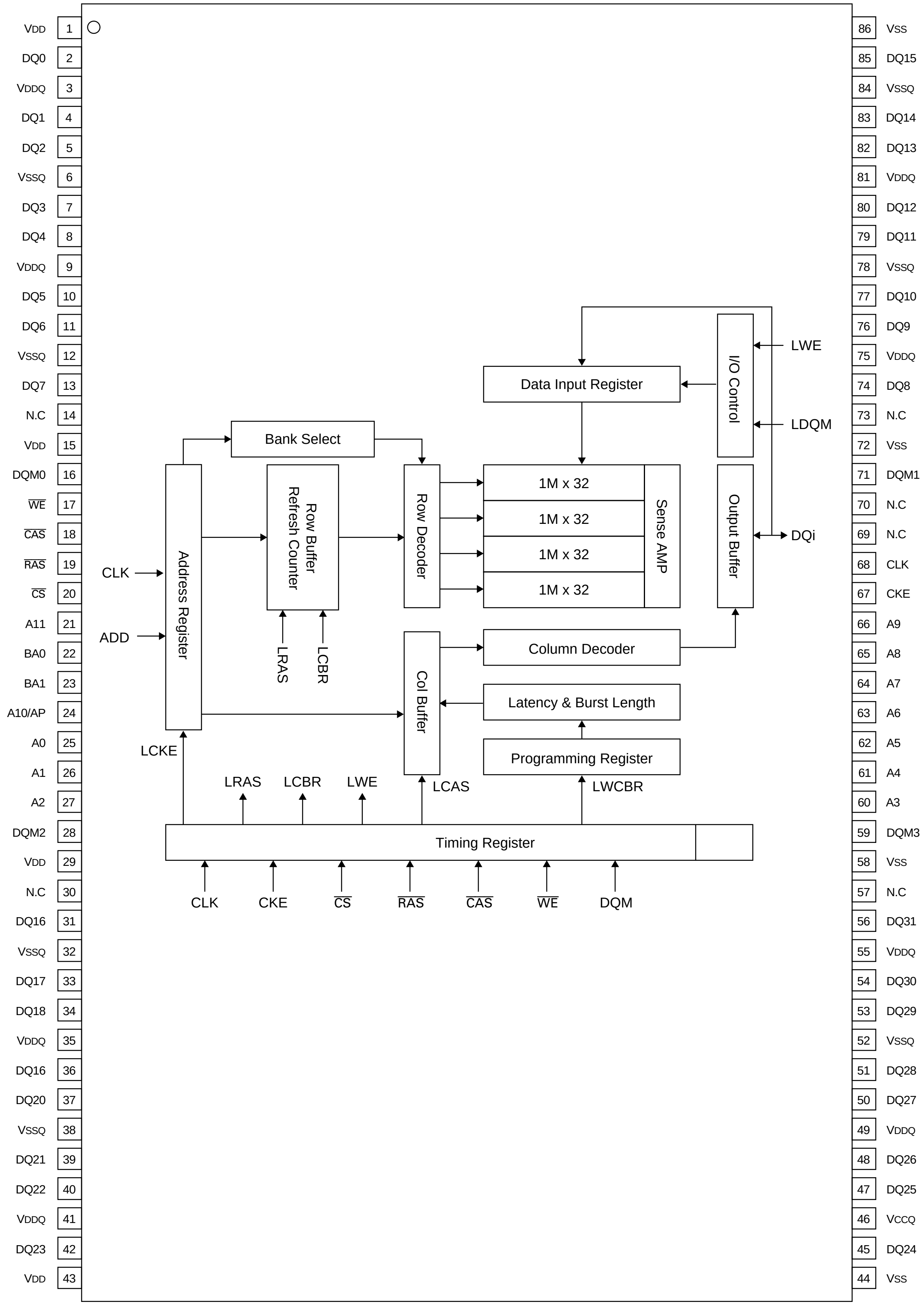
Pin No.	Pin Name	I/O	Format	Function and Operation
1	VHOLD1	I		Not used
2	HLF1	I		Not used
3	INVBST	O	C	Inverter boost output
4	LD	O	C	COMAC,COMDC latch signal output
5	DI	O	C	COMAC,COMDC data output
6	REMIN	O	C	COMAC,COMDC clock output
7	REMIN	I	C	Remote control signal input
8	BYTE	I		GND connection
9	CNVSS	I		GND connection
10	VDDSENS	I		VDD power supply sense input
11	5060IN	I		50/60Hz input
12	RESET	I		Reset input
13	XOUT	O		Clock output
14	VSS			GND
15	XIN	I		Clock input
16	VCC			Power supply
17	OSDCLK	I		Clock input for OSD
18	NC			Not used
19	YSSTOP	O	C	NAVI over write enable output
20	OSDTOP	O	C	OSD/NAVI over write enable output
21	OSDBLNK	O	C	OSD blanking output
22	NC			Not used
23	MUTE	O	C	2 screens IC mute output
24	DIMMER	O	C	Dimmer pulse output
25	NC			Not used
26	INVPUL	O	C	Inverter pulse output
27	ICRES	O	C	IC reset output
28	SCL	O	C	2 screens IC clock output
29,30	NC			Not used
31	SDA	I/O	C	2 screens IC data input/output
32	OSDR	O	C	OSD analog R signal output
33	OSDG	O	C	OSD analog G signal output
34	OSDB	O	C	OSD analog B signal output
35	KYDT	O	C	Key data output
36	DPDT	I		Display data input
37	TSCK	I		Test mode clock input
38	EPRDI	I		EEPROM data input for adjustment memory
39	EPRDO	O	C	EEPROM data output for adjustment memory
40	NC			Not used
41	EPRCS	O	C	EEPROM chip select output for adjustment memory
42	EPRCK	O	C	EEPROM clock output for adjustment memory
43	TESTIN	I		Chip test input
44-50	NC			Not used
51	FSCWIDE	I		Not used
52	LCD76	I		LCD size select (H:7inch, L:6.5inch) input
53	EPRCV	I		EEPROM adjustment input
54-61	NC			Not used
62	HSYNC	I		HSYNC signal input for OSD
63	NC			Not used
64	VSYNC	I		VSYNC signal input for OSD
65,66	NC			Not used
67,68	KS2,1	I/O	C	Key strobe input/output
69-72	KD4-1	I	C	Key data input
73,74	NC			Not used
75	STEST2	I		Touch panel test mode input

Pin No.	Pin Name	I/O	Format	Function and Operation
76	NC			Not used
77	SELFRST	I		Self write reset input
78,79	NC			Not used
80	PNLXV	O	C	Touch panel:X direction sense output
81	MFLPW	O	C	Back light power supply control output
82	MVIPW	O	C	Video power supply control output
83	ROMCS	O	C	EEPROM chip select output
84	ROMCK	O	C	EEPROM clock output
85	ROMDATA	I		EEPROM data input
86	EPRPST	I		EEPROM initalize input for memory adjustment
87	STEST1	I		Monitor mode input
88	EPRTEST	I		EEPROM set mode input for memory adjustment
89	TEMPSEN	I		Temperature sense input for inverter boost
90	PNLYV	O	C	Touch panel:Y direction sense output
91	PNLVD	O	C	Touch panel:sense output
92	PNLADY	I		Touch panel:X data input
93	PNLADX	I		Touch panel:Y data input
94	LSEN	I		Brightness on the outside sense input
95	VHOLD2	I		Not used
96	HLF2	I		Not used
97	CVIN2	I		Not used
98	TVSETB	I		Test mode input
99	VCCE			Power supply
100	CVIN1	I		Not used

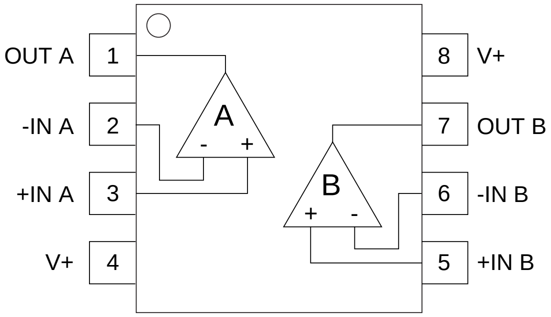
*PEG087A



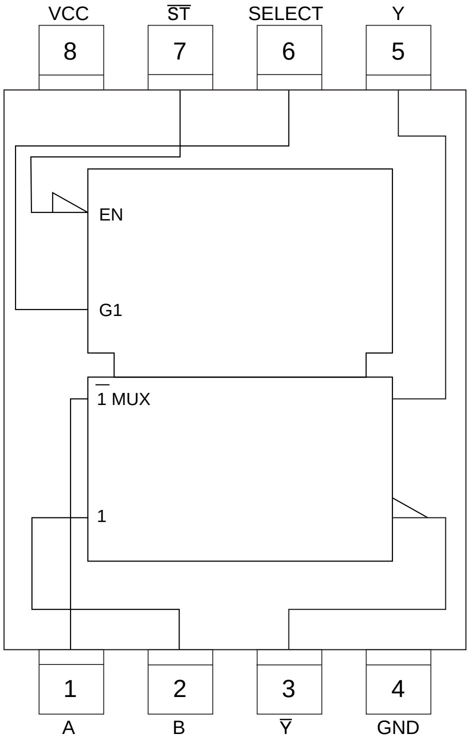
*K4S283232E-TC75


VDD 1
DQ0 2
VDDQ 3
DQ1 4
DQ2 5
VSSQ 6
DQ3 7
DQ4 8
VDDQ 9
DQ5 10
DQ6 11
VSSQ 12
DQ7 13
N.C 14
VDD 15
DQM0 16
$\overline{WE}$ 17
$\overline{CAS}$ 18
$\overline{RAS}$ 19
$\overline{CS}$ 20
A11 21
BA0 22
BA1 23
A10/AP 24
A0 25
A1 26
A2 27
DQM2 28
VDD 29
N.C 30
DQ16 31
VSSQ 32
DQ17 33
DQ18 34
VDDQ 35
DQ16 36
DQ20 37
VSSQ 38
DQ21 39
DQ22 40
VDDQ 41
DQ23 42
VDD 43
86 VSS
85 DQ15
84 VSSQ
83 DQ14
82 DQ13
81 VDDQ
80 DQ12
79 DQ11
78 VSSQ
77 DQ10
76 DQ9
75 VDDQ
74 DQ8
73 N.C
72 VSS
71 DQM1
70 N.C
69 N.C
68 CLK
67 CKE
66 A9
65 A8
64 A7
63 A6
62 A5
61 A4
60 A3
59 DQM3
58 VSS
57 N.C
56 DQ31
55 VDDQ
54 DQ30
53 DQ29
52 VSSQ
51 DQ28
50 DQ27
49 VDDQ
48 DQ26
47 DQ25
46 VCCQ
45 DQ24
44 VSS
I/O Control
LWE
Data Input Register
LDQM
Bank Select
Row Buffer
Refresh Counter
Row Decoder
1M x 32
1M x 32
1M x 32
1M x 32
Sense AMP
Output Buffer
DQi
CLK
Address Register
ADD
LRAS
LCBR
Column Decoder
Col Buffer
Latency & Burst Length
Programming Register
LCKE
LRAS
LCBR
LWE
LCAS
LWCBR
Timing Register
CLK
CKE
$\overline{CS}$
$\overline{RAS}$
$\overline{CAS}$
$\overline{WE}$
DQM

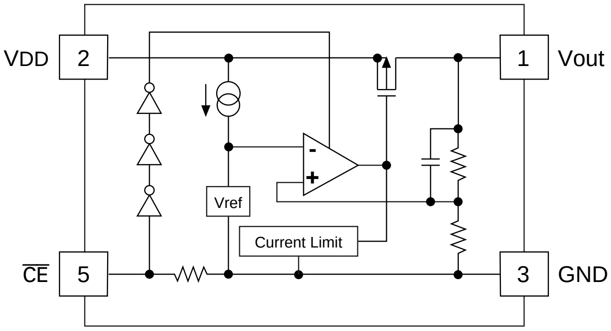
NJM2140R


OUT A
1
-IN A
2
+IN A
3
V+
4
A
-
+
B
+
-
8
V+
7
OUT B
6
-IN B
5
+IN B

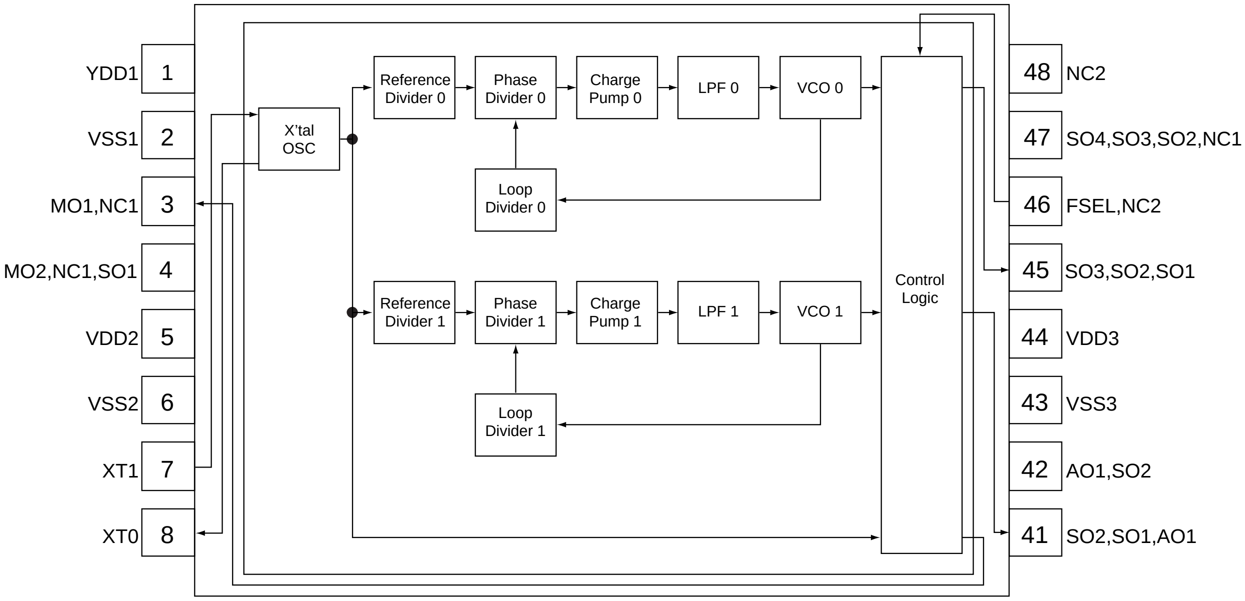
*TC7WH157FU


VCC
8
ST
7
SELECT
6
Y
5
EN
G1
1 MUX
1
1
A
2
B
3
Y
4
GND

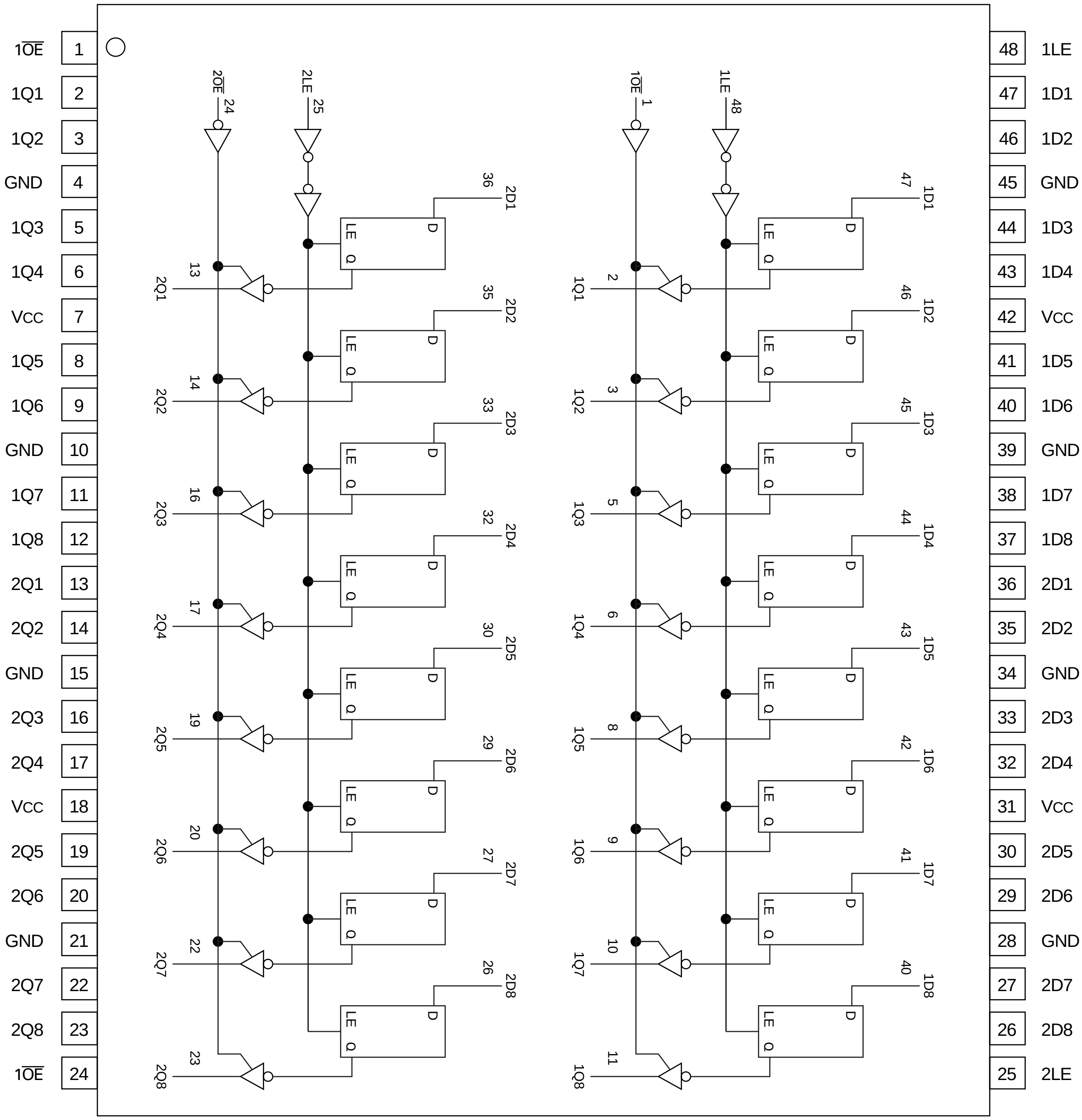
*R1130H501B


VDD
2
CE
5
Vref
Current Limit
1
Vout
3
GND

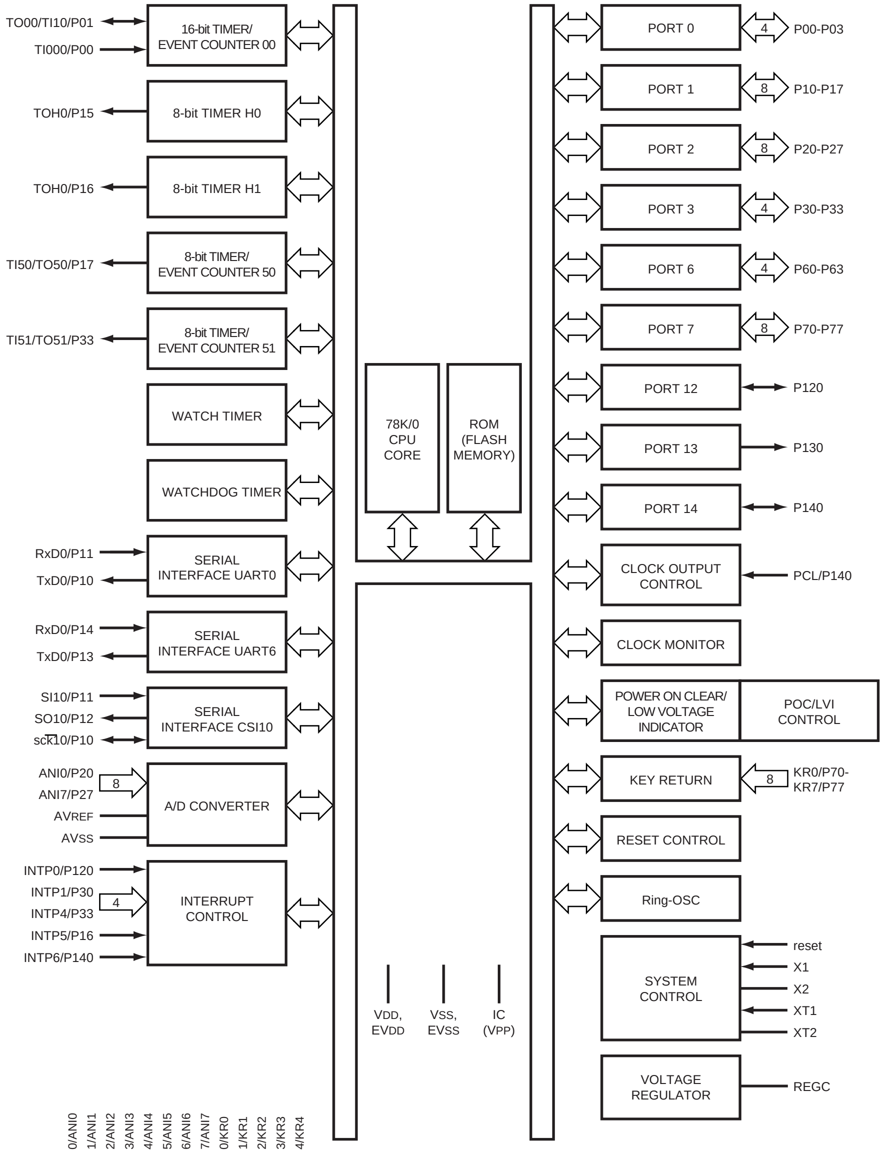
*SM8707LV

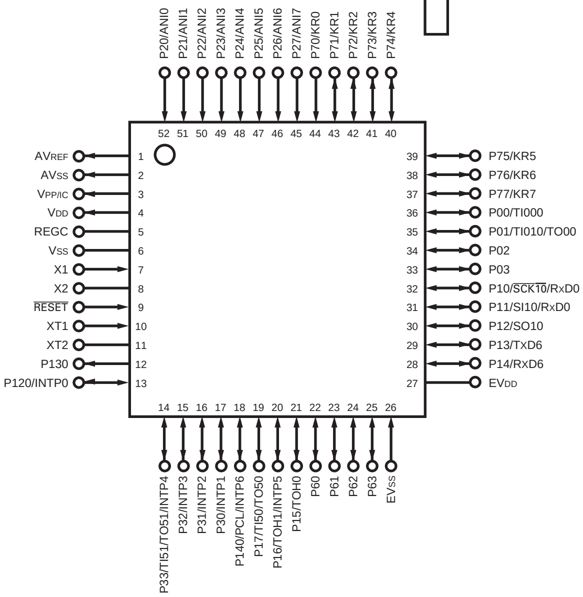

YDD1
1
VSS1
2
MO1,NC1
3
MO2,NC1,SO1
4
VDD2
5
VSS2
6
XT1
7
XT0
8
X'tal
OSC
Reference
Divider 0
Phase
Divider 0
Charge
Pump 0
LPF 0
VCO 0
Loop
Divider 0
Reference
Divider 1
Phase
Divider 1
Charge
Pump 1
LPF 1
VCO 1
Loop
Divider 1
Control
Logic
48
NC2
47
SO4,SO3,SO2,NC1
46
FSEL,NC2
45
SO3,SO2,SO1
44
VDD3
43
VSS3
42
AO1,SO2
41
SO2,SO1,AO1

*TC74LCX16373AFT

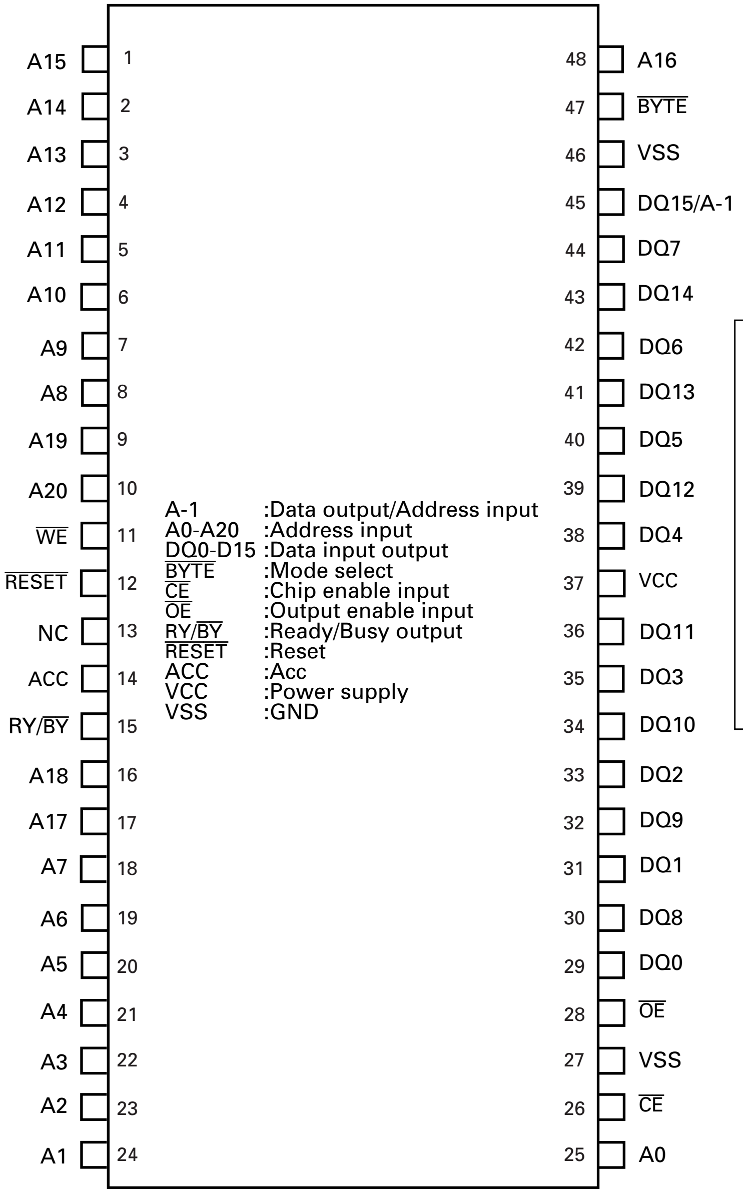

1OE 1
1Q1 2
1Q2 3
GND 4
1Q3 5
1Q4 6
Vcc 7
1Q5 8
1Q6 9
GND 10
1Q7 11
1Q8 12
2Q1 13
2Q2 14
GND 15
2Q3 16
2Q4 17
Vcc 18
2Q5 19
2Q6 20
GND 21
2Q7 22
2Q8 23
1OE 24
48 1LE
47 1D1
46 1D2
45 GND
44 1D3
43 1D4
42 Vcc
41 1D5
40 1D6
39 GND
38 1D7
37 1D8
36 2D1
35 2D2
34 GND
33 2D3
32 2D4
31 Vcc
30 2D5
29 2D6
28 GND
27 2D7
26 2D8
25 2LE
2OE 24
2LE 25
1OE 1
1LE 48
LE
D
Q
2D1 36
2D2 35
2D3 33
2D4 32
2D5 30
2D6 29
2D7 27
2D8 26
2Q1 13
2Q2 14
2Q3 16
2Q4 17
2Q5 19
2Q6 20
2Q7 22
2Q8 23
1D1 47
1D2 46
1D3 45
1D4 44
1D5 43
1D6 42
1D7 41
1D8 40
1Q1 2
1Q2 3
1Q3 5
1Q4 6
1Q5 8
1Q6 9
1Q7 10
1Q8 11

*PE5401A


TO00/TI10/P01
TI000/P00
16-bit TIMER/ EVENT COUNTER 00
TOH0/P15
8-bit TIMER H0
TOH0/P16
8-bit TIMER H1
TI50/TO50/P17
8-bit TIMER/ EVENT COUNTER 50
TI51/TO51/P33
8-bit TIMER/ EVENT COUNTER 51
WATCH TIMER
WATCHDOG TIMER
RxD0/P11
TxD0/P10
SERIAL INTERFACE UART0
RxD0/P14
TxD0/P13
SERIAL INTERFACE UART6
SI10/P11
SO10/P12
sck10/P10
SERIAL INTERFACE CSI10
ANI0/P20
ANI7/P27
8
AVREF
AVSS
A/D CONVERTER
INTP0/P120
INTP1/P30
4
INTP4/P33
INTP5/P16
INTP6/P140
INTERRUPT CONTROL
78K/0 CPU CORE
ROM (FLASH MEMORY)
VDD, EVDD
VSS, EVSS
IC (VPP)
PORT 0
4
P00-P03
PORT 1
8
P10-P17
PORT 2
8
P20-P27
PORT 3
4
P30-P33
PORT 6
4
P60-P63
PORT 7
8
P70-P77
PORT 12
P120
PORT 13
P130
PORT 14
P140
CLOCK OUTPUT CONTROL
PCL/P140
CLOCK MONITOR
POWER ON CLEAR/ LOW VOLTAGE INDICATOR
POC/LVI CONTROL
KEY RETURN
8
KR0/P70-KR7/P77
RESET CONTROL
Ring-OSC
SYSTEM CONTROL
reset
X1
X2
XT1
XT2
VOLTAGE REGULATOR
REGC

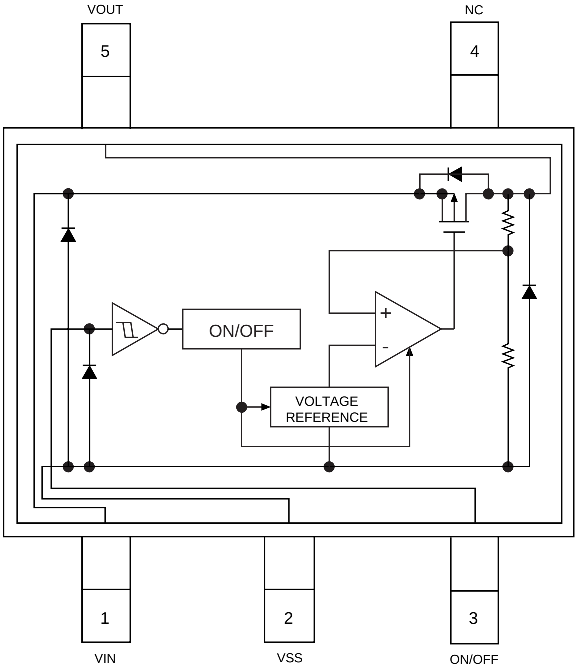

P20/ANI0
P21/ANI1
P22/ANI2
P23/ANI3
P24/ANI4
P25/ANI5
P26/ANI6
P27/ANI7
P70/KR0
P71/KR1
P72/KR2
P73/KR3
P74/KR4
52 51 50 49 48 47 46 45 44 43 42 41 40
AVREF 1
AVSS 2
VPP/IC 3
VDD 4
REGC 5
VSS 6
X1 7
X2 8
RESET 9
XT1 10
XT2 11
P130 12
P120/INTP0 13
39 P75/KR5
38 P76/KR6
37 P77/KR7
36 P00/TI000
35 P01/TI010/TO00
34 P02
33 P03
32 P10/SCK10/RxD0
31 P11/SI10/RxD0
30 P12/SO10
29 P13/TxD6
28 P14/RxD6
27 EVDD
14 15 16 17 18 19 20 21 22 23 24 25 26
P33/TI51/TO51/INTP4
P32/INTP3
P31/INTP2
P30/INTP1
P140/PCL/INTP6
P17/TI50/TO50
P16/TOH1/INTP5
P15/TOH0
P60
P61
P62
P63
EVSS

*PD6516A

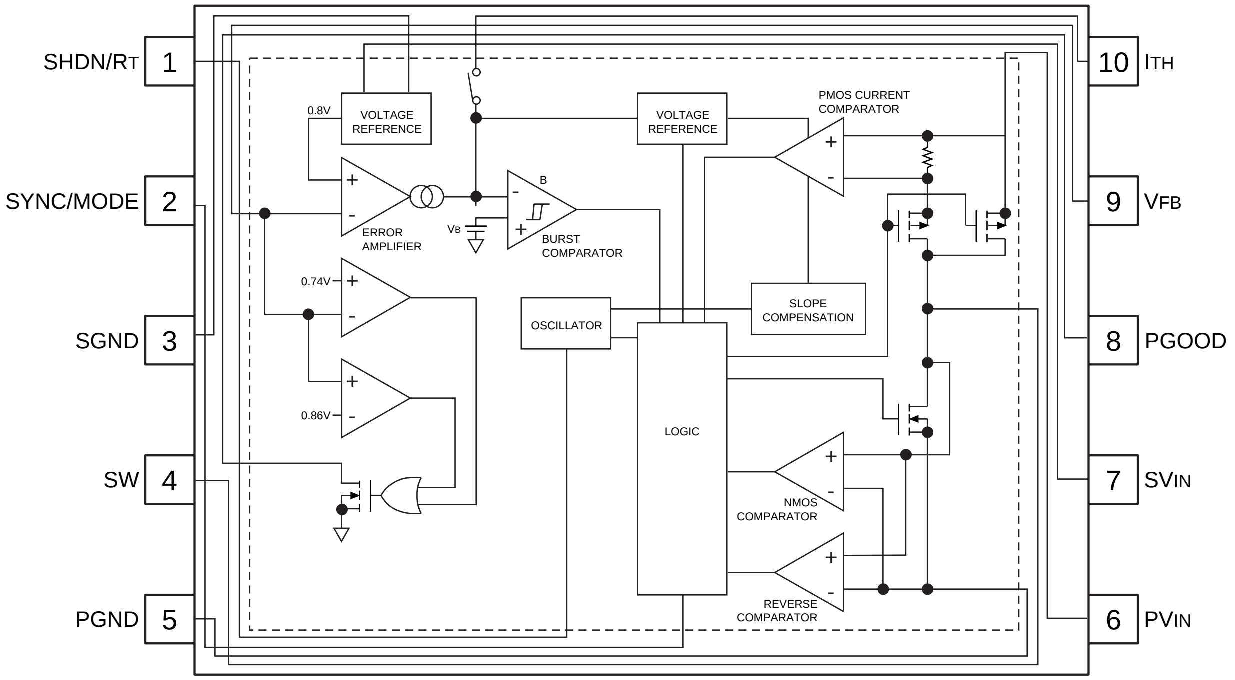

A15 1
A14 2
A13 3
A12 4
A11 5
A10 6
A9 7
A8 8
A19 9
A20 10
$\overline{WE}$ 11
$\overline{RESET}$ 12
NC 13
ACC 14
RY/$\overline{BY}$ 15
A18 16
A17 17
A7 18
A6 19
A5 20
A4 21
A3 22
A2 23
A1 24
48 A16
47 $\overline{BYTE}$
46 VSS
45 DQ15/A-1
44 DQ7
43 DQ14
42 DQ6
41 DQ13
40 DQ5
39 DQ12
38 DQ4
37 VCC
36 DQ11
35 DQ3
34 DQ10
33 DQ2
32 DQ9
31 DQ1
30 DQ8
29 DQ0
28 $\overline{OE}$
27 VSS
26 $\overline{CE}$
25 A0

A-1 :Data output/Address input
A0-A20 :Address input
DQ0-D15 :Data input output
$\overline{BYTE}$:Mode select
$\overline{CE}$:Chip enable input
$\overline{OE}$:Output enable input
RY/$\overline{BY}$:Ready/Busy output
$\overline{RESET}$:Reset
ACC :Acc
VCC :Power supply
VSS :GND

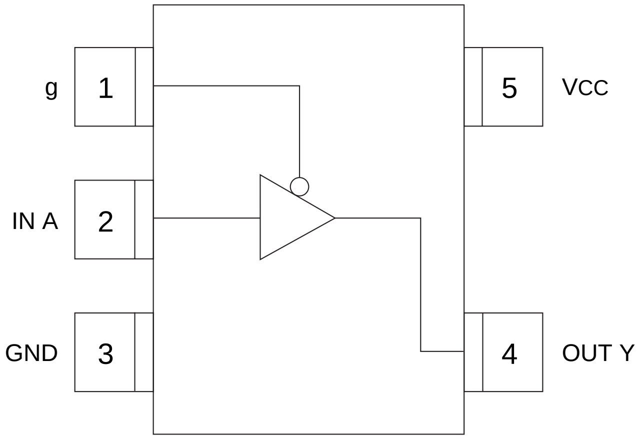
*S-L2980A50MC-C7J


VOUT
5
NC
4
ON/OFF
+
-
VOLTAGE
REFERENCE
1
VIN
2
VSS
3
ON/OFF

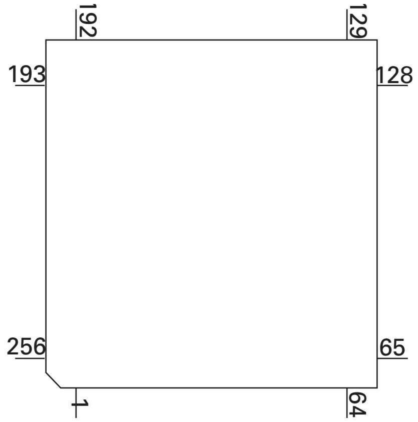
*LTC3411EMS


SHDN/RT
1
SYNC/MODE
2
SGND
3
SW
4
PGND
5
10
ITH
9
VFB
8
PGOOD
7
SVIN
6
PVIN
0.8V
VOLTAGE REFERENCE
ERROR AMPLIFIER
VB
B
BURST COMPARATOR
VOLTAGE REFERENCE
PMOS CURRENT COMPARATOR
0.74V
0.86V
OSCILLATOR
SLOPE COMPENSATION
LOGIC
NMOS COMPARATOR
REVERSE COMPARATOR

*TC7SZ125FU


g
1
IN A
2
GND
3
5
VCC
4
OUT Y

*MN35104UB


192
129
193
128
256
65
1
64

Pin Functions(MN35104UB)

Pin No.	Pin Name	I/O	Function and Operation
1	VDD33		IO power supply
2,3	MDQ	I / O	SDRAM data
4	VSS		GND
5,6	MDQ	I / O	SDRAM data
7	VDD33		IO power supply
8-10	MDQ	I / O	SDRAM data
11	VSS		GND
12,13	MDQ	I / O	SDRAM data
14	VDD33		IO power supply
15	VDD15		Power supply
16	VSS		GND
17	EXADR	I / O	Memory address
18	NEXWE	O	Memory write enable
19-22	EXADT	I / O	Memory address data
23	VDD33		IO power supply
24	VSS		GND
25,26	EXADR	I / O	Memory address
27,28	EXADT	I / O	Memory address data
29	VDD33		IO power supply
30	VSS		GND
31,32	EXADT	I / O	Memory address data
33	NEXCE	O	Memory chip select
34-37	EXADT	I / O	Memory address data
38,39	EXADR	I / O	Memory address
40,41	EXADT	I / O	Memory address data
42	VD33		IO power supply
43	VSS		GND
44,45	EXADT	I / O	Memory address data
46	NEXOE	O	Memory output(Read) enable
47	P15	I / O	Memory address bus
48	P14	I / O	The flag of transmitting end
49	P13	I / O	The flag of transmitting start
50	P12	I / O	Serial clock
51	P11	I / O	Serial output data
52	P10	I / O	Serial input data
53	P9	I / O	Serial clock
54	P8	I / O	Serial output data
55	P7	I / O	Serial input data
56	VDD3		IO power supply
57	MMOD	I	Test mode setting
58	VSS		GND
59	P6	I / O	Serial clock

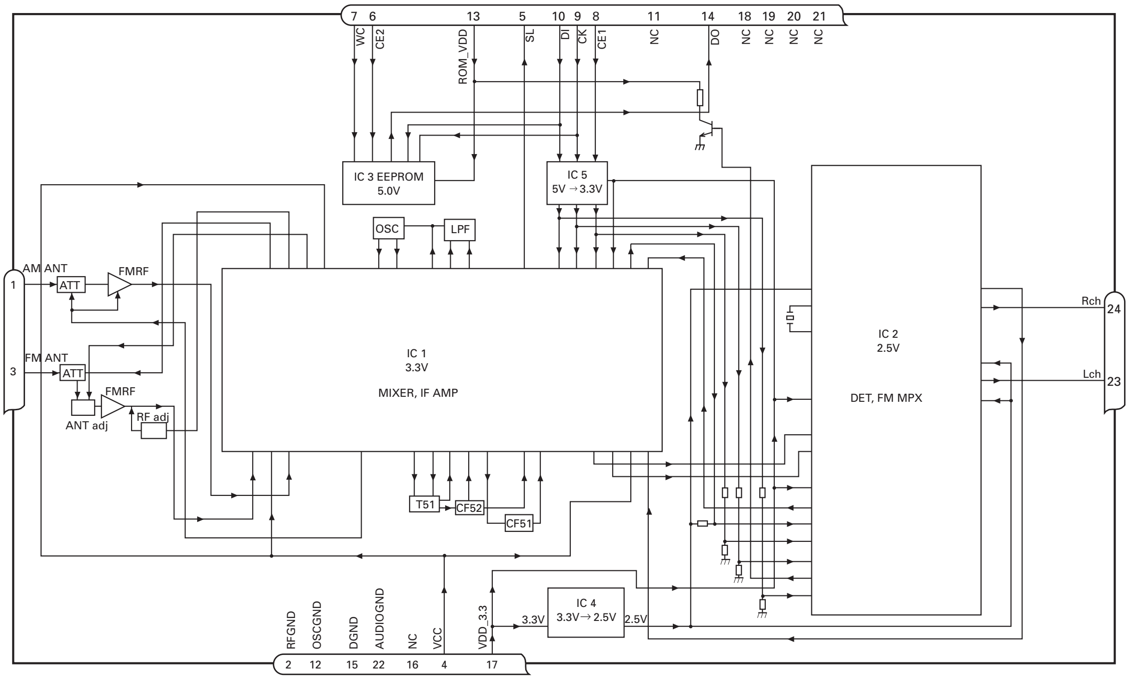
Pin No.	Pin Name	I/O	Function and Operation
60	P5	I / O	Serial output data
61	P4	I / O	Serial input data
62	P3	I / O	Serial clock
63	P2	I / O	Serial output data
64	P1	I / O	Serial input data
65	P0	I / O	Serial clock
66	FG	I	Motor FG
67	VDD15		Power supply
68	NRST	I	Master reset
69	VSS		GND
70-77	DRV	I / O	Servo port
78	DRV8		Servo port
79	VDD33		IO power supply
80	VSS	I / O	GND
81	SCLOCK	I / O	Input clock for debug
82	EXTRG	I / O	I/O trigger for debug
83	SDATA	I / O	I/O data for debug
84	EXTRG	I / O	I/O trigger for debug
85	TRCCLK	I / O	Output trace clock for debug
86-89	TRCDATA	I / O	I/O trace data for debug
90	TRCST	I / O	Output trace status for debug
91	VDD33		Power supply
92	OSCI	I	Front end clock input
93	VSS		GND
94-97	MONI	I / O	Inside monitor
98	VDD15		Power supply
99	VSS		GND
100-103	MONI	I / O	Inside monitor
104	AVDDD	O	Power supply
105	PLFIL1		DRC VCO
106	AVSSD	O	GND
107	PLFIL2	O	DRC VCO
108-110	VREF	I	Reference voltage
111	VC0	I	gm-cEQ
112	RESI	O	gm-cEQ
113	ANAMONI	O	Inside analog monitor
114	POFLT	O	DPDOFTR
115	CDATA		Inline data
116	CCAPA	O	Inline capacitor
117	CGD	O	Reference voltage
118	AVDDC		Analog current
119	AVSSC	I	Analog GND

Pin No.	Pin Name	I/O	Function and Operation
120	RFINN	I	RF input
121	RFINP	I	RF input
122-131	VIN	I	Head input
132	LPC1	O	DVDLPC input
133	LPCO1	I	DVDLPC output
134	LPC2	O	CDLPC input
135	LPCO2	O	CDLPC output
136	VREFH	O	Reference voltage
137	VHALF		Reference voltage
138	AVSSB	O	Analog GND
139	CTKC	I	TC
140	CSLFLT	O	Capasitor
141	CWBLOUT	I	DC cut for wobble
142	CWBLIN		DC cut for wobble
143	VCOF	I	JFVCO control voltage
144	RVI		VREFH reference current
145	AVDDB	I	Analog current
146-148	AD	I	AD input
149	AVDDA		Analog current
150	DAC1	O	Tracking drive output
151	AVSSA		Analog GND
152	DAC0	O	Focus drive output
153	AVDDE		Analog current
154	IREF1	I	Inside DAC bias current
155	AVSSE		Analog GND
156	COMP1	I	Inside DAC
157	AVDDF		Analog current
158	DAC1OUT	O	Analog signal
159	AVSSF		Analog GND
160	DAC2OUT	O	Analog signal
161	DAC3OUT	O	Analog signal
162	VREF	I	Reference voltage
163	DAC4OUT	O	Analog signal
164	DAC5OUT	O	Analog signal
165	AVDDG	I	Analog power suplly
166	IREF2		Inside DAC bias current
167	VSSG	I	Analog GND
168	COMP2		Inside DAC
169	VSS	I	GND
170	BECLK		Backend clock input
171	VDD33	I	IO power supply
172	EXTCK		Exterior audio clock

Pin No.	Pin Name	I/O	Function and Operation
173	PHCOMPO		Composite audio clock
174	LRCK	O	LR chanel clock output
175	SRCK	O	Bit clock output
176	ADOUT3	O	Audio down mixing
177	VSS	O	GND
178-180	ADOUT	O	Audio data
181	IECOUT	O	IEC958 digital audio output
182	VDD33		IO power supply
183	VSS		GND
184,185	MDQ	I / O	SDRAM data
186	VDD15		Power supply
187,188	MDQ	I / O	SDRAM data
189	VDD33		IO power supply
190-193	MDQ	I / O	SDRAM data
194	VSS		GND
195	VDD33		IO power supply
196,197	MDQ	I / O	SDRAM data
198	VSS		GND
199-201	MDQ	I / O	SDRAM data
202	VDD33		GND
203-205	MDQ	I / O	SDRAM data
206	VSS		GND
207,208	DQM	O	SDRAM data mask
209	VDD33		Power supply
210	MA	O	SDRAM address
211	VSS		GND
212	MA4	O	SDRAM address
213	VDD15		Power supply
214	MA2	O	SDRAM address
215	VSS		GND
216,217	MA	O	SDRAM address
218	VDD33		Power supply
219,220	MA	O	SDRAM address
221	VSS		GND
222	VDD15		Power supply
223	MCKI	I	SDRAM output clock
224	VSS		GND
225	MCK	O	SDRAM input clock
226	VDD33		IO power supply
227-229	MA	O	SDRAM address
230	VSS		GND
231	MA	O	SDRAM address

Pin No.	Pin Name	I/O	Function and Operation
232	NWE	O	SDRAM writte enable
233	VDD33		IO power supply
234	BA0	O	SDRAM bank address
235	MA	O	SDRAM address
236	VSS		GND
237	BA1	O	SDRAM bank address
238	NCSM	O	SDRAM chip select
239	NRAS	O	SDRAM low address strobe
240	VDD33		IO power supply
241	VSS		GND
242	NCAS	O	SDRAM column address strobe
243	DQM0	O	SDRAM data mask
244	VDD15		Power supply
245	VSS		GND
246	DQM	O	SDRAM data mask
247	MDQ	I / O	SDRAM data
248	VSS		GND
249	MDQ	I / O	SDRAM data
250	VDD33		IO power supply
251-253	MDQ	I / O	SDRAM data
254	VSS		GND
255,256	MDQ	I / O	SDRAM data

● FM/AM Tuner Unit


7 6 13 5 10 9 8 11 14 18 19 20 21
WC
CE2
ROM_VDD
SL
DI
CK
CE1
NC
DO
NC
NC
NC
NC
IC 3 EEPROM
5.0V
IC 5
5V → 3.3V
OSC
LPF
AM ANT
1
ATT
FMRF
FM ANT
3
ATT
FMRF
ANT adj
RF adj
IC 1
3.3V
MIXER, IF AMP
IC 2
2.5V
DET, FM MPX
Rch
24
Lch
23
T51
CF52
CF51
IC 4
3.3V → 2.5V
3.3V
2.5V
RFGND
OSCGND
DGND
AUDIOGND
NC
VCC
VDD_3.3
2 12 15 22 16 4 17

No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7µH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75Ω Surge absorber(DSP-201M-S00B) is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4V ± 0.3V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM ”Low” active
7	WC	I	write control	You can write EEPROM, when EEPROM write control is “Low”. Ordinary non connection
8	CE1	I	chip enable-1	Chip enable for AF•RF ”High” active
9	CK	I	clock	Clock
10	DI	I	data in	Data input
11	NC		non connection	Not used
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3V ± 0.2V
18	NC		non connection	Not used
19	NC		non connection	Not used
20	NC		non connection	Not used
21	NC		non connection	Not used
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo “L-ch” signal output or AM audio output
24	R ch	O	R channel output	FM stereo “R-ch” signal output or AM audio output

7.3 EXPLANATION

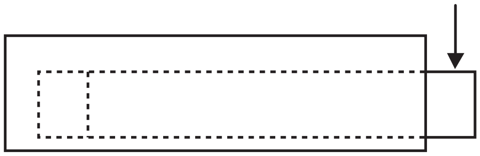
7.3.1 MECHANISM DESCRIPTIONS

● Outline of the FLAP motion

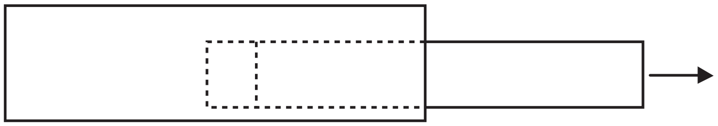
1. The motion is actuated made by two motors, the forward/backward driving motor (CXB9515) and the angle driving motor (CXB9516).
2. Analog electric potential generated by the angle encoder is detected to detect angle motion status and motion position.
3. Memory function for the angle last position is accomplished by the micro processor using the 256 resolution steps of the VDD.
4. A pulse is detected by the photo interrupter to detect the horizontal motion status.
5. In the case of reset start, the monitor will be in a stored position first, and ejection motion will take place, which puts the system in the booted up state.
6. Angle adjustment is made by the angle key (+/-).
7. OPEN/CLOSE key makes the monitor stored or ejected, and temporary folding key folds the monitor temporarily.
8. Setting of the monitor auto storage/ejection ON/OFF and set back ON/OFF at the time of ACC ON/OFF is made on the navigation menu screen.
9. A backlight is switched-off during forward/backward and storage.

● Explanation on the FLAP ejection motion

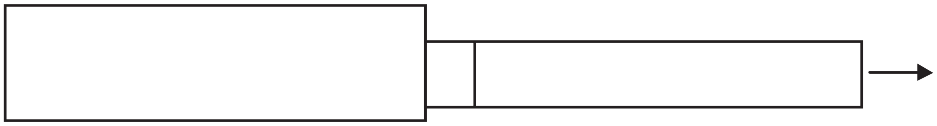
1. When the OPEN key is pressed or ACC is set to ON while the auto OPEN/CLOSE is being set to ON, angle driving motor rotates in the 0° direction for 500ms. (Pressed down.)



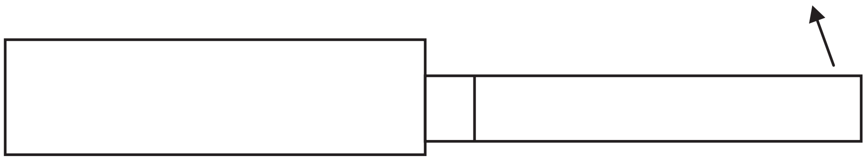
2. After 500ms, the angle driving motor is stopped, and the forward/backward driving motor rotates in the ejection direction.



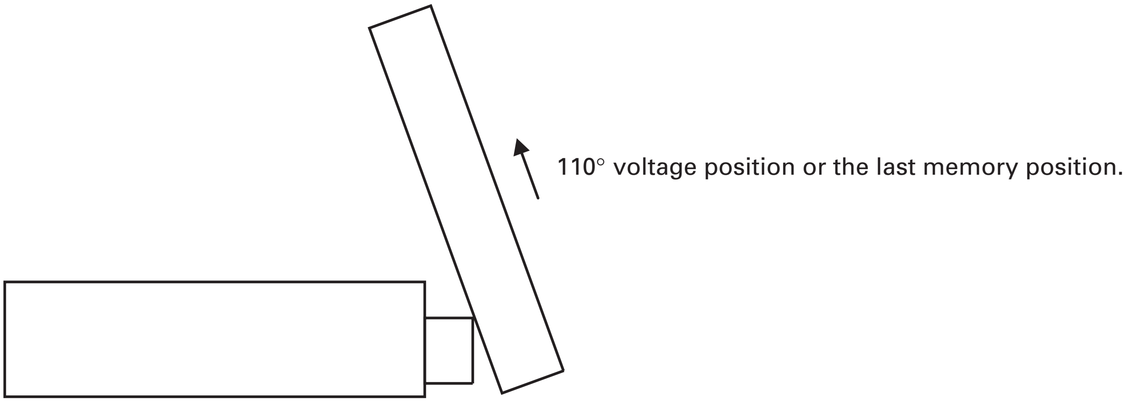
3. For a period of 600ms from the time when LIFTSW is switched from H to L, the forward/backward driving motor keeps rotating in the ejection direction.



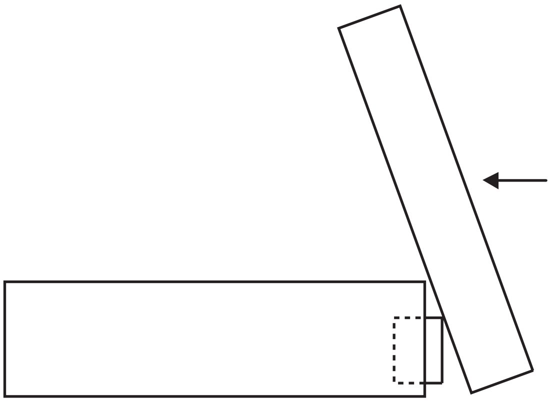
4. After 600ms, the forward/backward driving motor is stopped, and the angle driving motor rotates in the UP direction.



5. When the angle voltage reaches the voltage for 110°, brake is applied to the angle driving motor, and the ejection is completed. (In case the previous angle is stored in the memory, the motion continues to that angle.)

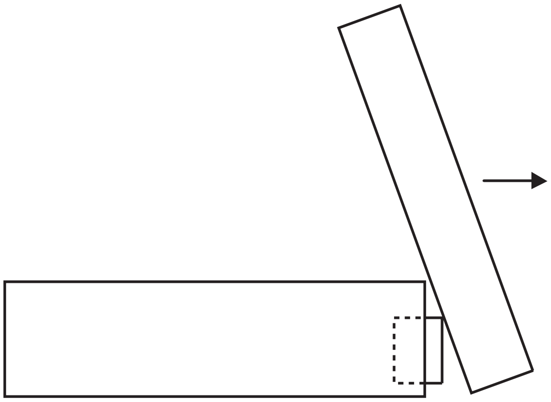


6. When the setback is set to ON, after the monitor angle voltage has reached the previously memorized voltage, brake is applied to the angle driving motor, then the forward/backward driving motor is rotated in slow speed in the storage direction. After that, when LIFTSW has switched from L to H, the forward/backward driving motor is stopped.

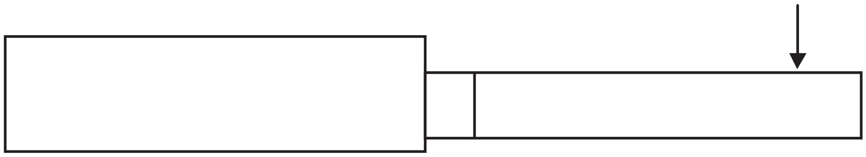


● Explanation of the FLAP storage motion

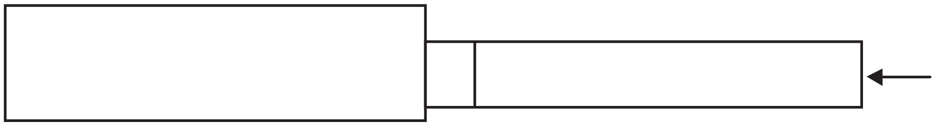
1. When CLOSE key is pressed, or after 6 seconds from ACC OFF when auto OPEN/CLOSE is being set to ON, the angle driving motor is rotated in the 0° direction. In case the setback setting is ON, the forward/backward driving motor is rotated in high speed in the ejection direction and the motor continues to rotate for 600ms from the time when LIFTSW is switched from H to L, then the angle driving motor is rotated in the 0° direction.



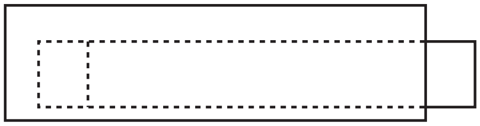
2. For a period of 500ms from the time when DIGOSW is switched from H to L, the angle driving motor is rotated in the 0° direction for the “pressed down” motion.



3. After 500ms, brake is applied to the angle driving motor, and then the forward/backward driving motor is rotated in the storage direction.

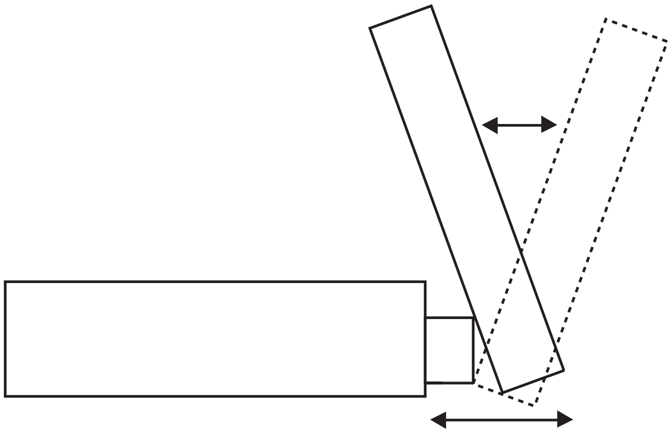


4. When the horizontal motion detection pulse is no longer detected for 200ms, brake is applied and the monitor storage motion is completed.



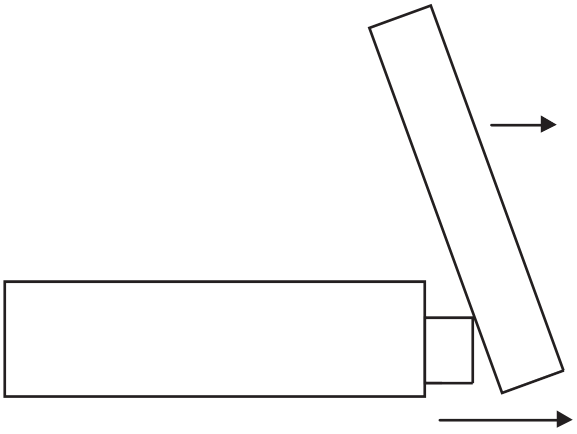
● Explanation on the FLAP angle adjustment

1. The angle driving motor is rotated in UP direction by the “+” key and in DOWN direction by the “–” key from the monitor stop position. If the key is kept pressed, the monitor will keep changing the angle without steps within the range of 50 to 110 degrees. When the setback is being set to ON, the forward/backward driving motor is rotated in the horizontal ejection direction while the key is being pressed, and angle adjustment is made by changing the angle voltage to the extent the angle adjustment key is effective after 600ms has elapsed from the time when LIFTSW has switched from H to L. When 3 seconds have elapsed from the time of angle adjustment completion, the forward/backward driving motor is rotated in slow speed in the horizontal storage direction, and brake is applied when LIFTSW has switched from L to H.

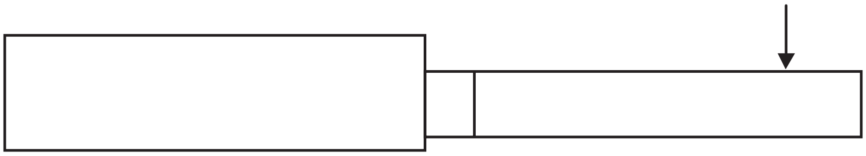


● Explanation on the FLAP temporary folding operation

1. By pressing the temporary folding key, the angle driving motor is rotated from the monitor stop position toward 0° direction. When the setback is being set to ON, the forward/backward driving motor is rotated when the key is pressed, brake is applied after 600ms has elapsed from the time when LIFTSW has switched from H to L, and the angle driving motor is rotated in 0° direction.



2. For a period of 500ms after DEGOSW has switched from H to L, the angle driving motor is rotated, and the monitor stops at its horizontal position by the brake. After 7 seconds, navigator operation sound is heard three times in 1 second interval. After 10 seconds, the angle driving motor is rotated in UP direction, and then the brake is applied to stop the motor at the last memory position. When the setback is being set to ON, after the angle driving motor stops at the last memory position, the forward/backward driving motor is rotated in slow speed in the horizontal storage direction, and the motor stops after LIFTSW has switched from L to H.



● Notes related to the FLAP motion

1. Regarding the angle position, angle voltage is always checked, and the last memory is stored by addition or subtraction of the voltage. It should be noted, however, that the last memory will not be stored when the monitor is manually moved by force.
2. If the expected pulse is not detected during horizontal motion, the monitor will stop at that position.

● Table of driving unit operations by different preset modes

		OPEN state	In OPEN motion	In CLOSE motion	CLOSE state
Auto OPEN/CLOSE setting ON	Bup ON (Reset start)	CLOSE state ↓ CLOSE ↓ OPEN state ↓ Last angle	—	—	Continue OPEN motion ↓ Last angle
	Bup OFF	To stand-by	To stand-by	To stand-by	To stand-by
	Bup OFF → ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC ON	No state change	—	—	OPEN motion ↓ Last angle ↓ Return
	ACC OFF → ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC OFF	6 sec from ACC OFF ↓ Advance ↓ CLOSE motion ↓ CLOSE	Continue OPEN motion ↓ Last angle ↓ Return ↓ 6 sec from ACC OFF ↓ Advance ↓ CLOSE motion ↓ CLOSE	Continue CLOSE motion ↓ CLOSE	No state change
	Last memory	OPEN	OPEN	CLOSE	CLOSE
Auto OPEN/CLOSE setting OFF	Bup ON (Reset start)	—	—	—	—
	Bup OFF	To stand-by	To stand-by	To stand-by	To stand-by
	Bup OFF → ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC ON	No state change	—	—	No state change
	ACC OFF → ON	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	ACC OFF	No state change	Continue OPEN motion ↓ Last angle ↓ Return	Continue CLOSE motion ↓ CLOSE	No state change
	Last memory	OPEN	OPEN	CLOSE	CLOSE

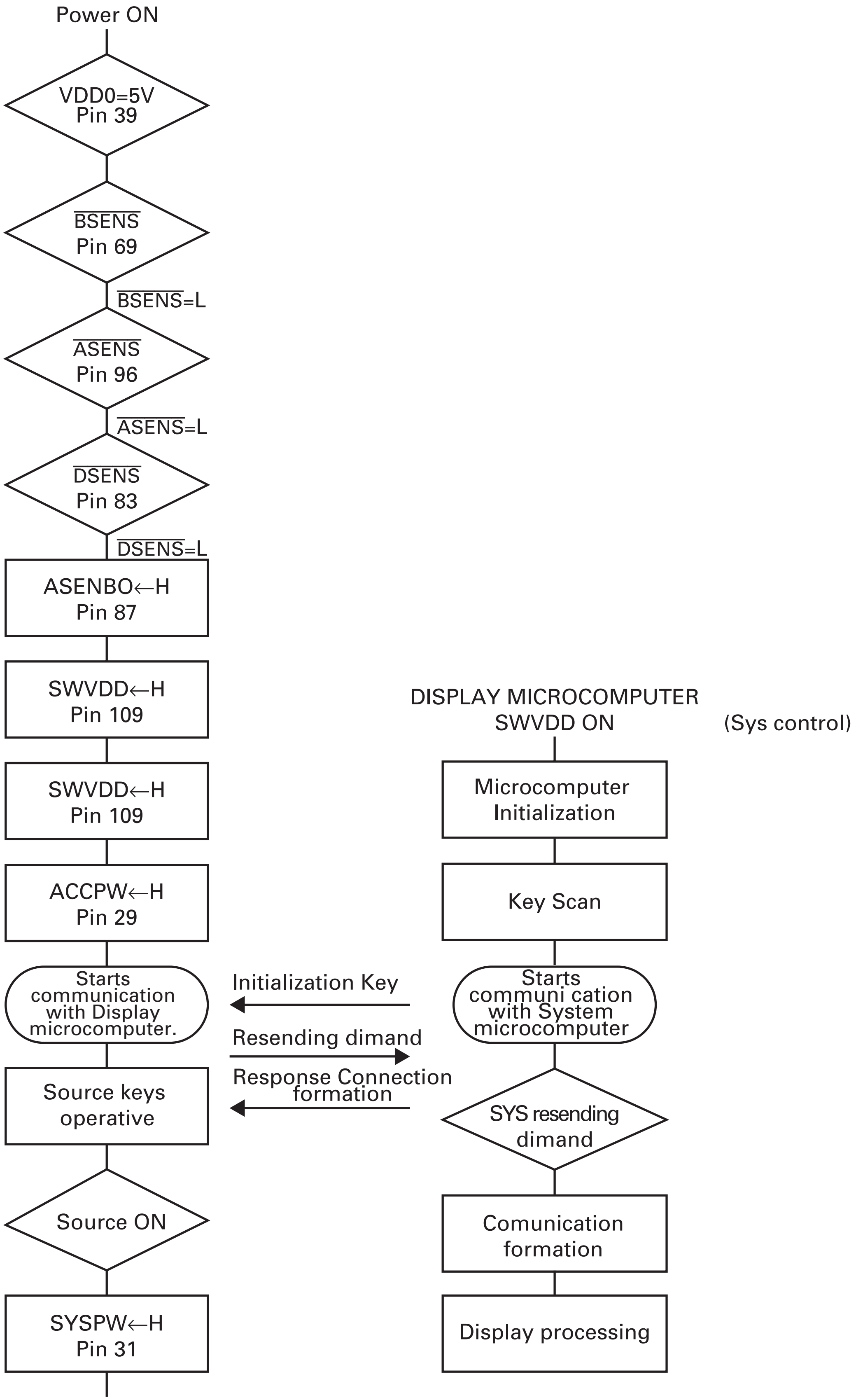
* When the setback is being set to OFF, there will be no advance/return motion.
After ACC OFF, if ACC is switched ON again during the 6 seconds counting, standby will be passed and the FLAP status will not change.

Table of temporary folding control

		Temporary folding state (horizontal position)	Temporary folding reset (horizontal position→last angle)	Temporary folding in motion (last angle→horizontal position)
Auto OPEN/CLOSE setting ON	Bup ON	———	———	———
	Bup OFF	To stand-by	To stand-by	To stand-by
	Bup OFF→ ON	Continue temporary folding motion	Continue OPEN motion ↓ Last angle ↓ Return	Continue temporary folding motion ↓ Temporary folding
	ACC ON	———	———	———
	ACC OFF→ ON	OPEN motion ↓ Last angle ↓ Return	Continue OPEN motion ↓ Last angle ↓ Return	Continue temporary folding motion ↓ Temporary folding
	ACC OFF	6 sec from ACC OFF ↓ CLOSE motion ↓ CLOSE	Continue OPEN motion ↓ Last angle ↓ Return ↓ 6 sec from ACC OFF ↓ Advance ↓ CLOSE motion ↓ CLOSE	Continue temporary folding motion ↓ Temporary folding ↓ 6 sec from ACC OFF ↓ CLOSE motion ↓ CLOSE
	Last memory	OPEN	OPEN	OPEN
Auto OPEN/CLOSE setting OFF	Bup ON	———	———	———
	Bup OFF	To stand-by	To stand-by	To stand-by
	Bup OFF→ ON	Continue temporary folding motion	Temporary folding reset	Temporary folding in motion
	ACC ON	———	———	———
	ACC OFF→ ON	OPEN motion ↓ Last angle ↓ Return	Continue OPEN motion ↓ Last angle ↓ Return	OPEN motion ↓ Last angle ↓ Return
	ACC OFF	OPEN motion ↓ Last angle ↓ Return	Continue OPEN motion ↓ Last angle ↓ Return	OPEN motion ↓ Last angle ↓ Return
	Last memory	OPEN	OPEN	OPEN

* When the setback is being set to OFF, there will be no advance/return motion.

7.3.2 OPERATIONAL FLOW CHART


Power ON
VDD0=5V Pin 39
BSENS Pin 69
BSENS=L
ASENS Pin 96
ASENS=L
DSENS Pin 83
DSENS=L
ASENBO←H Pin 87
SWVDD←H Pin 109
SWVDD←H Pin 109
ACCPW←H Pin 29
Starts communication with Display microcomputer.
Source keys operative
Source ON
SYSPW←H Pin 31
DISPLAY MICROCOMPUTER SWVDD ON
(Sys control)
Microcomputer Initialization
Key Scan
Starts communi cation with System microcomputer
SYS resending dimand
Comunication formation
Display processing
Initialization Key
Resending dimand
Response Connection formation

Completes power-on operation.
(After that, proceed to each source operation)

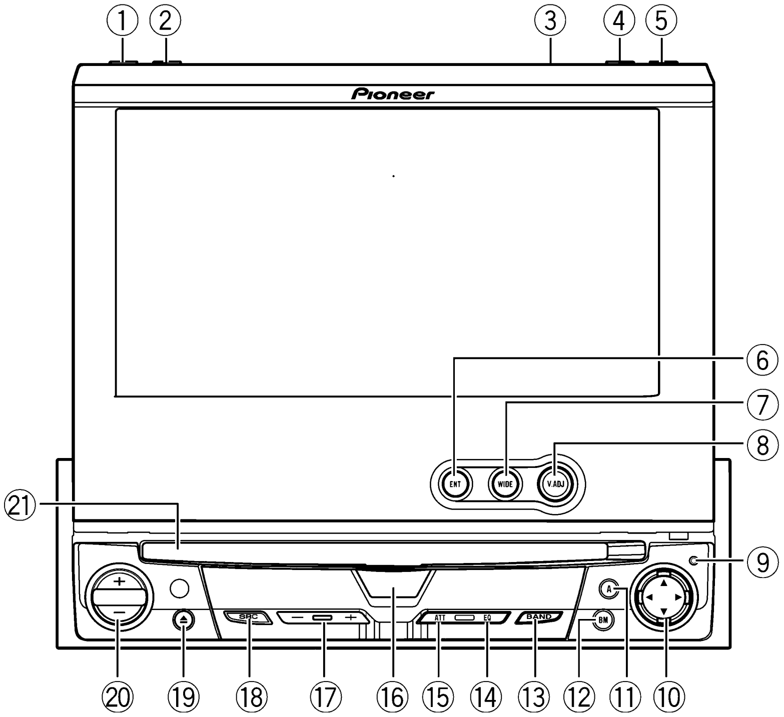
7.4 CLEANIG

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

Portions to be cleaned	Cleaning tools
DVD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

Portions to be cleaned	Cleaning tools
Fans	Cleaning paper : GED-008

8. OPERATIONS



Head unit

① **INFO button**
Press to turn the information bar on/off.

② **PGM button**
Press to operate the preprogrammed functions for each source.

③ **Ambient light sensor**
Senses ambient light. This system automatically adjusts the brightness of the display to compensate for ambient light.

④ **FLIP DOWN button**
Press to turn the LCD panel horizontal temporarily from upright position.

⑤ **OPEN/CLOSE button**
Press to open or close the LCD panel.

⑥ **ENTERTAINMENT (ENT) button**
Press to switch between the background displays.

⑦ **WIDE button**
Press to select a desired mode for enlarging a 4:3 picture to a 16:9 one.

⑧ **V.ADJ button**
Press and hold to display the picture adjustment menu.

⑨ **RESET button**
Press to return to the factory settings (initial settings).

⑩ **▲/▼/◄/► buttons**
Press to do manual seek tuning, fast forward, reverse and track search controls.

⑪ **A.MENU button**
Press to display **MENU**.

⑫ **BOOKMARK (BM) button**
Press to bookmark a scene that you want to resume playback.

⑬ **BAND/ESC button**
Press to select among three FM bands and one AM band and to cancel the control mode of functions.

⑭ **EQ button**
Press to select various equalizer curves.

⑮ **ATT button**
Press to quickly lower the volume level, by about 90%. Press once more to return to the original volume level.

⑯ **Release button**
Press downward to detach the front panel.

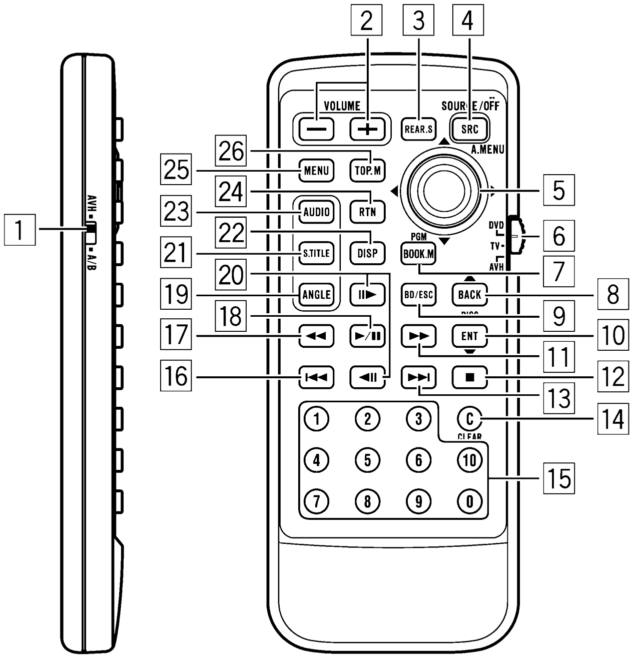
⑰ **ANGLE (+/–) button**
Press to change the LCD panel angle.

⑱ **SOURCE button**
This unit is turned on by selecting a source. Press to cycle through all the available sources.

⑲ **EJECT button**
Press to eject a disc from this unit.

⑳ **VOLUME**
Press to increase or decrease the volume.

㉑ **Disc loading slot**
Insert a disc to play. ▣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AVH
A/B
VOLUME
SOURCE/OFF
REAR.S
SRC
A.MENU
MENU
TOP.M
AUDIO
RTN
S.TITLE
DISP
PGM
BOOK.M
DVD
TV
AVH
ANGLE
BD/ESC
BACK
ENT
C
CLEAR
1
2
3
4
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10
7
8
9
0

Remote control

1 **Remote control selection switch**
Switch to change the setting of the remote control.

2 **VOLUME buttons**
Press to increase or decrease the volume.

3 **REAR.S button**
Not used.

4 **SOURCE button**
Press to cycle through all the available sources. Press and hold to turn the source off.

5 **Joystick**
Move to do fast forward, reverse and track search controls. Click to recall **MENU**.

6 **Remote control operation mode switch**
Switch the operation mode between **AVH**, **DVD** and **TV** modes. Normally, set to **AVH**.

7 **BOOKMARK (BOOK.M) button**
AVH mode: Press to operate the preprogrammed functions for each source.

DVD mode: Press to turn the bookmark function on or off.
TV mode: Not used.

8 **BACK button**
AVH mode: Press to return to the previous display.
DVD mode with remote control code A: Press to select the next disc when the multi-DVD player is connected.
DVD mode with remote control code B or AVH: Not used.
TV mode: Not used.

9 **BAND/ESC button**

AVH mode: Press to select among three FM bands and one AM band and to cancel the control mode of functions.
DVD mode: Press to switch mode between MP3/WMA and audio data (CD-DA) when playing discs with MP3/WMA and audio data (CD-DA) such as CD-EXTRA and MIXED-MODE CDs.
TV mode: Not used.

10 **ENTERTAINMENT (ENT) button**

AVH mode: Press to switch between the background displays.
DVD mode with remote control code A: Press to select the previous disc when the multi-DVD player is connected.
DVD mode with remote control code B or AVH: Not used.
TV mode: Not used.

11 **FORWARD (▶▶) button**

AVH mode or **DVD** mode: Press to perform fast forward.
TV mode: Not used.

12 **STOP (■) button**

AVH mode or **DVD** mode: Press to stop playback.
TV mode: Not used.

13 **NEXT (▶▶|) button**

AVH mode or **DVD** mode: Press to go to the next track (chapter).
TV mode: Not used.

14 **CLEAR button**

AVH mode or **DVD** mode: Press to cancel the input number when **0-9** are used.
TV mode: Not used.

15 **0–10 buttons**

AVH mode: Press **0-9** to directly select the desired track, preset tuning or disc. Buttons **1–6** can operate the preset tuning for the tuner or disc number search for the multi-CD player.
DVD mode: Press to directly select the desired track, chapter or disc.
TV mode: Not used.

16 **PREVIOUS (|◀◀) button**

AVH mode or **DVD** mode: Press to return to the previous track (chapter).
TV mode: Not used.

17 **REVERSE (◀◀) button**

AVH mode or **DVD** mode: Press to perform fast reverse.
TV mode: Not used.

18 **PLAY/PAUSE (▶/II) button**

AVH mode or **DVD** mode: Press to switch sequentially between playback and pause.
TV mode: Not used.

19 **ANGLE button**

AVH mode or **DVD** mode: Press to change the viewing angle during DVD playback.
TV mode: Not used.

20 **STEP (II▶/◀II) button**

AVH mode or **DVD** mode: Press to move ahead one frame at a time during DVD/VideoCD playback. Press and hold for one second to activate slow playback.
TV mode: Not used.

21 **SUBTITLE (S.TITLE) button**

AVH mode or **DVD** mode: Press to change the subtitle language during DVD playback.
TV mode: Not used.

22 **DISPLAY button**

AVH mode or **DVD** mode: Press to select different displays.
TV mode: Not used.

23 AUDIO button

AVH mode or **DVD** mode: Press to change the audio language during DVD playback.
TV mode: Not used.

24 RETURN button

AVH mode or **DVD** mode: Press to display the PBC (playback control) menu during PBC playback.
TV mode: Not used.

25 MENU button

AVH mode or **DVD** mode: Press to display the DVD menu during DVD playback.
TV mode: Not used.

26 TOP MENU (TOP.M) button

AVH mode or **DVD** mode: Press to return to the top menu during DVD playback.
TV mode: Not used.

Using the remote control operation mode switch

There are three remote control operation modes on the remote control.

AVH mode operation

When operating this unit by remote control, the mode is normally switched to **AVH**.

- The joystick on the remote control can perform the same operations as the one on the head unit. Furthermore, the joystick can perform the same operations as the touch panel keys ▲, ▼, ◄ and ►.
- **1–6** can perform the same operations as the preset tuning keys **P1—P6** and the disc selection keys **01—06**.
  — If you want to select a disc located at 7 to 12 by using buttons **1–6**, press and hold the corresponding numbers, such as **1** for disc 7, until the disc number appears in the display.

DVD mode operation

If you switch the mode to **DVD**, the joystick and **0–10** operations are changed for DVD player.

● When you want to operate the following functions, switch the mode to DVD:

- When operating the DVD menu by using the joystick.
- When operating the PBC menu by using **0–10**.
- When specifying title by using **0–10**.

Note

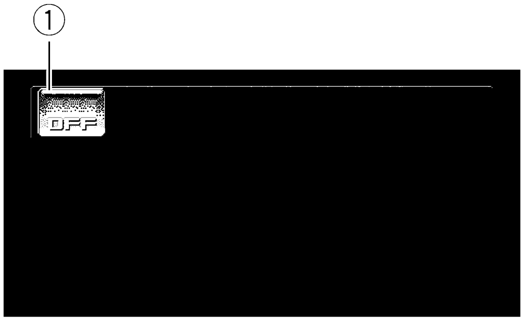
With the mode switched to **DVD**, you cannot use these buttons; **BACK** and **ENTERTAINMENT (ENT)**.

TV mode operation

TV operations available with a Pioneer TV tuner (e.g. GEX-P5750TV(P)) can be controled with **AVH** mode. **TV** mode is not used with this unit.

- For details concerning operation, refer to the TV tuner’s operation manuals. ■

Turning the unit on and selecting a source



① **Source icon**
Shows which source has been selected.

You can select a source you want to listen to. To switch to the DVD player, load a disc in the unit to switch to **DVD**.

● **When using the touch panel keys, touch the source icon and then touch the desired source name.**

The source names are displayed and selectable ones are highlighted.

- **DVD** – Built-in DVD player
- **S-DVD** – DVD player/multi-DVD player
- **M-CD** – Multi-CD player
- **TUNER** – Tuner
- **TV** – Television
- **iPod** – iPod
- **EXT-1** – External unit 1
- **EXT-2** – External unit 2
- **AUX** – AUX
- **AV** – AV input
- **OFF** – Turn the unit off

■ When the source icon is not displayed, you can display it by touching the screen.

■ To return to the playback display, touch **ESC**.

● **When using the buttons, press SOURCE to select a source.**

Press **SOURCE** repeatedly to switch between the following sources:

TUNER (tuner)—**TV** (television)—**AV** (AV)—**DVD** (built-in DVD player)—**S-DVD** (DVD player/multi-DVD player)—**M-CD** (multi-CD player)—**iPod** (iPod)—**EXT-1** (external unit 1)—**EXT-2** (external unit 2)—**AUX** (AUX)

Notes

- In the following cases, the sound source will not change:
  - — When there is no unit corresponding to the selected source connected to this unit.
  - — When there is no disc in the unit.
  - — When there is no disc in the DVD player.
  - — When there is no magazine in the multi-CD player.
  - — When there is no magazine in the multi-DVD player.
  - — When the AUX (auxiliary input) is set to off.
  - — When the AV (AV input) is not set to **VIDEO**.
- External unit refers to a Pioneer product (such as one available in the future) that, although incompatible as a source, enables control of basic functions by this unit. Two external units can be controlled by this unit. When two external units are connected, the allocation of them to external unit 1 or external unit 2 is automatically set by this unit.
- When this unit's blue/white lead is connected to the vehicle's auto-antenna relay control terminal, the vehicle's antenna extends when this unit's source is turned on. To retract the antenna, turn the source off. ■

Loading a disc

● **Insert a disc into the disc loading slot.**

Playback will automatically start.

- When the automatic playback function is on, this unit will cancel the DVD menu and automatically start playback from the first chapter of the first title.

■ To eject a disc, press **EJECT**.

Notes

- The DVD player plays one, standard, 12-cm or 8-cm (single) disc at a time. Do not use an adapter when playing 8-cm discs.
- Do not insert anything other than a disc into the disc loading slot.

- If you cannot insert a disc completely or if after you insert a disc the disc does not play, check that the label side of the disc is up. Press **EJECT** to eject the disc, and check the disc for damage before inserting it again.
- If an error message such as **ERROR-02** is displayed.
- If bookmark function is on, DVD playback resumes from the selected point.

Adjusting the volume

● **Use VOLUME to adjust the sound level.**

With the head unit, press **VOLUME** up/+ or down/– to increase or decrease the source volume.

With the remote control, press **VOLUME** to increase or decrease the volume.

Turning the unit off

● **When using the touch panel keys, touch the source icon and then touch OFF.**

■ When the source icon is not displayed, you can display it by touching the screen.

● **When using the buttons, press SOURCE and hold until the unit turns off.**

Using the rear display

You can watch a DVD/Video CD/TV/AV on the rear display.

1 Press A.MENU button and touch SETUP to display the setup function names.

2 Touch R.DISP on the setup menu to display video of the selected source on rear display.

Touch **R.DISP** until **SOURCE** appears in the display.

- **SOURCE** – Display the video of the selected source on rear display
- **V.D.P.** – Display the AVG-VDP1 on rear display

Note

When a Pioneer Vehicle Dynamics Processor (AVG-VDP1) is connected to this unit, the AVG-VDP1 can be displayed on the rear display.

Displaying the AVG-VDP1 (Pioneer Vehicle Dynamics Processor)

This unit can be used as the display unit for the AVG-VDP1 (sold separately) product.

- You can operate this function only when a Pioneer Vehicle Dynamics Processor (AVG-VDP1) is connected to this unit.

Dsiplaying AVG-VDP1

● **Press V.ADJ to switch the display to the AVG-VDP1.**

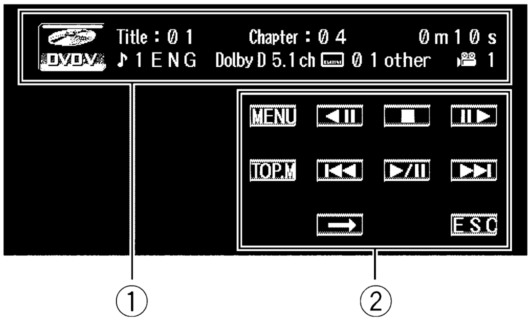
▪ To return to the video of sources, press **V.ADJ** again.

Note

You can also use **WIDE** and **ENTERTAINMENT (ENT)** buttons when you display the AVG-VDP1. For details concerning operation, refer to the AVG-VDP1 operation manual. ■

Touch panel key basic operation

Activating the touch panel keys



① **Information bar**

② **Touch panel keys**
Touch to do various operations.

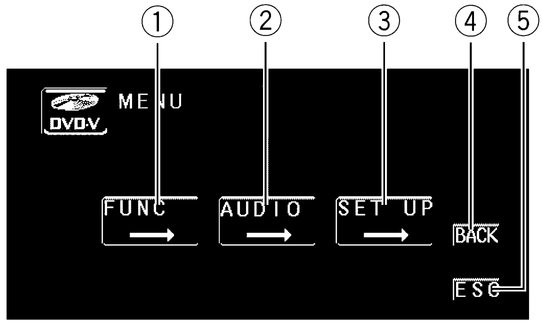
1 Touch the screen to activate the touch panel keys corresponding to each source.
The touch panel keys appear on the display.
▪ To go to the next group of touch panel keys, touch →.

2 Touch ESC to hide the touch panel keys.

Note

If you do not use the touch panel keys within 30 seconds, they will be hidden automatically.

Operating the menu



① **FUNCTION key**
Touch to select functions for each source.

② **AUDIO key**
Touch to select various sound quality controls.

③ **SETUP key**
Touch to select various setup functions.

④ **BACK key**
Touch to return to the previous display.

⑤ **ESC key**
Touch to cancel the control mode of functions.

1 Press A.MENU button to display MENU.
MENU appears on the display.

2 Touch the desired key to display the function names you want to operate.
■ To go to the next group of function names, touch **NEXT**.
■ To return to the previous group of function names, touch **PREV**.

3 Touch ESC to return to the display of each source.

Note

If you do not operate the function within about 30 seconds, the display is automatically returned to the playback display. ■

Opening and closing the LCD panel

The LCD panel will be opened or closed automatically with the turning of the ignition switch on or off. You can turn off the automatic close/open function.

- Do not close the LCD panel with hands by force. That cause malfunction.
- The automatic close/open function will operate the display as follows.
  - — When the ignition switch is turned OFF while the LCD panel is opened, the LCD panel will close after six seconds.
  - — When the ignition switch is turned ON again (or turned to ACC), the LCD panel will be opened automatically.
  - — Removing or attaching the front panel will automatically close or open the LCD panel.
- When the ignition switch is turned OFF after the LCD panel has been closed, turning the ignition switch ON again (or turning it to ACC) will not open the LCD panel. In this case, press **OPEN/CLOSE** to open the LCD panel.
- When closing the LCD panel, check to make sure that it has closed completely. If the LCD panel has stopped halfway, leaving it like this could result in damage.

● **Press OPEN/CLOSE to open the LCD panel.**
■ To close the LCD panel, press **OPEN/CLOSE** again.

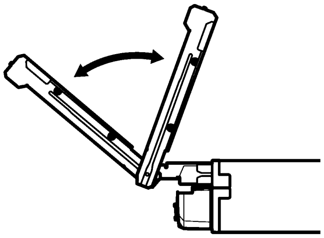
Adjusting the LCD panel angle

Important

- If you can hear the LCD panel knocking against your vehicle's console or dashboard, press **ANGLE (–)** to move the LCD panel a little forward.
- When adjusting the LCD panel angle, be sure to press **ANGLE (+/–)**. Forcibly adjusting the LCD panel by hand may damage it.

● **Press ANGLE (+/–) to adjust the LCD panel to an easily viewable angle.**

The LCD panel angle continues changing as long as you press **ANGLE (+/–)** and hold.



▪ The adjusted LCD panel angle will be memorized and automatically returned to the next time the LCD panel is opened.

Turning the LCD panel horizontal

When the LCD panel is upright and it hinders the operation of the air conditioner, the panel can be turned horizontal temporarily.

● **Press FLIP DOWN to turn the LCD panel horizontal.**

▪ To return to original position, press **FLIP DOWN** again.

▪ The LCD panel returns to the original position automatically with beeping sound 10 seconds after operation. ▣

Changing the wide screen mode

You can select a desired mode for enlarging a 4:3 picture to a 16:9 one.

● **Press WIDE to select the desired setting.**

Press **WIDE** repeatedly to switch between the following settings:

FULL (full)—**JUST** (just)—**CINEMA** (cinema)—**ZOOM** (zoom)—**NORMAL** (normal)

FULL (full)

A 4:3 picture is enlarged in the horizontal direction only, giving you a 4:3 TV picture (normal picture) without any omissions.

JUST (just)

The picture is enlarged slightly at the center and the amount of enlargement increases horizontally to the ends, enabling you to enjoy a 4:3 picture without sensing any disparity even on a wide screen.

CINEMA (cinema)

The picture is enlarged by the same proportion as **FULL** or **ZOOM** in the horizontal direction and by an intermediate proportion between **FULL** and **ZOOM** in the vertical direction; ideal for a cinema-sized picture (wide screen picture) where captions lie outside.

ZOOM (zoom)

A 4:3 picture is enlarged in the same proportion both vertically and horizontally; ideal for a cinema-sized picture (wide screen picture).

NORMAL (normal)

A 4:3 picture is displayed as it is, giving you no sense of disparity since its proportions are the same as that of the normal picture.

Notes

- Different settings can be memorized for each video source.
- When video is viewed in a wide screen mode that does not match its original aspect ratio, it may appear different.
- Remember that using the wide mode feature of this system for commercial or public viewing purposes may constitute an infringement on the author's rights protected by the Copyright Law.
- Video will appear grainy when viewed in **CINEMA** or **ZOOM** mode. ▣

Adjusting the picture adjustment

You can adjust **BRIGHT** (brightness), **CONTRAST** (contrast), **COLOR** (color) and **HUE** (hue) for each source and rear view camera.

- The adjustments of **BRIGHT** and **CONTRAST** are stored separately for light ambient (daytime) and dark ambient (nighttime). A sun ☀ or moon ☽ is displayed to the left of **BRIGHT** and **CONTRAST**, respectively, as the ambient light sensor determines brightness or darkness.
- You cannot adjust **HUE** for PAL video.
- You cannot adjust **COLOR** or **HUE** for the audio source.

1 Press V.ADJ and hold to display PICTURE ADJUST.

Press **V.ADJ** until **PICTURE ADJUST** appears in the display.

2 Touch any of the following touch panel keys to select the function to be adjusted.

The adjustment function names are displayed and adjustable ones are highlighted.

- **BRIGHT** – Adjust the black intensity
- **CONTRAST** – Adjust the contrast
- **COLOR** – Adjust the color saturation
- **HUE** – Adjust the tone of color (red is emphasized or green is emphasized)
- **DIMMER** – Adjust the brightness of display
- **BACK-CAMERA** – Switch to the picture adjustment display for the rear view camera

■ You can adjust the picture adjustment for rear view camera only when **B-CAM** is turned on.

■ With some rear view cameras, picture adjustment may not be possible.

3 Touch ◄ or ► to adjust the selected item.

Each time you touch ◄ or ► it increases or decreases the level of selected item. **+24** – **–24** is displayed as the level is increased or decreased.

4 Touch ESC to hide the touch panel keys.

Adjusting the dimmer

The adjustment of **DIMMER** is stored separately for each ambient light; daytime, evening and nighttime. The brightness of LCD screen will be adjusted to optimum level automatically in accordance with the ambient light based on the setting values.

1 Press V.ADJ and hold to display PICTURE ADJUST.

Press **V.ADJ** until **PICTURE ADJUST** appears in the display.

2 Touch DIMMER.

The ambient light level used as the standard for adjusting **DIMMER** appears above the level bar.

- Red sun ☀ – Adjust the brightness for bright ambient light (daytime)
- White sun ☼ – Adjust the brightness for intermediate brightness (evening)

- Blue moon ☽ – Adjust the brightness for dark ambient light (nighttime)

3 Touch ◀ or ▶ to adjust the brightness.
Each time you touch ◀ or ▶ moves the key towards the left or the right.
The level indicates the brightness of the screen being adjusted. The farther the key moves to the right, the brighter the screen.

4 Touch ESC to hide the touch panel keys.

Note

The icons indicating the current ambient brightness used for adjusting **BRIGHT** and **CONTRAST** may differ from **DIMMER** slightly. ▣

Protecting your unit from theft

The front panel can be detached from the head unit to discourage theft.

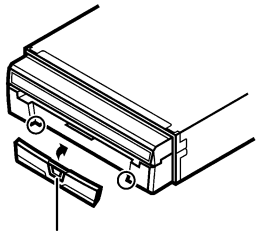
- If the front panel is not detached from the head unit within five seconds of turning off the ignition, a warning tone will sound.
- You can turn off the warning tone.

Important

- Never use force or grip the display and the buttons too tightly when removing or attaching.
- Avoid subjecting the front panel to excessive shocks.
- Keep the front panel out of direct sunlight and high temperatures.
- If removed, replace the front panel on the unit before starting up your vehicle.

Removing the front panel

● **Push the release button downward and release the front panel.**
Take care not to grip it too tightly or to drop the front panel and protect it from contact with water or other fluids to prevent permanent damage.

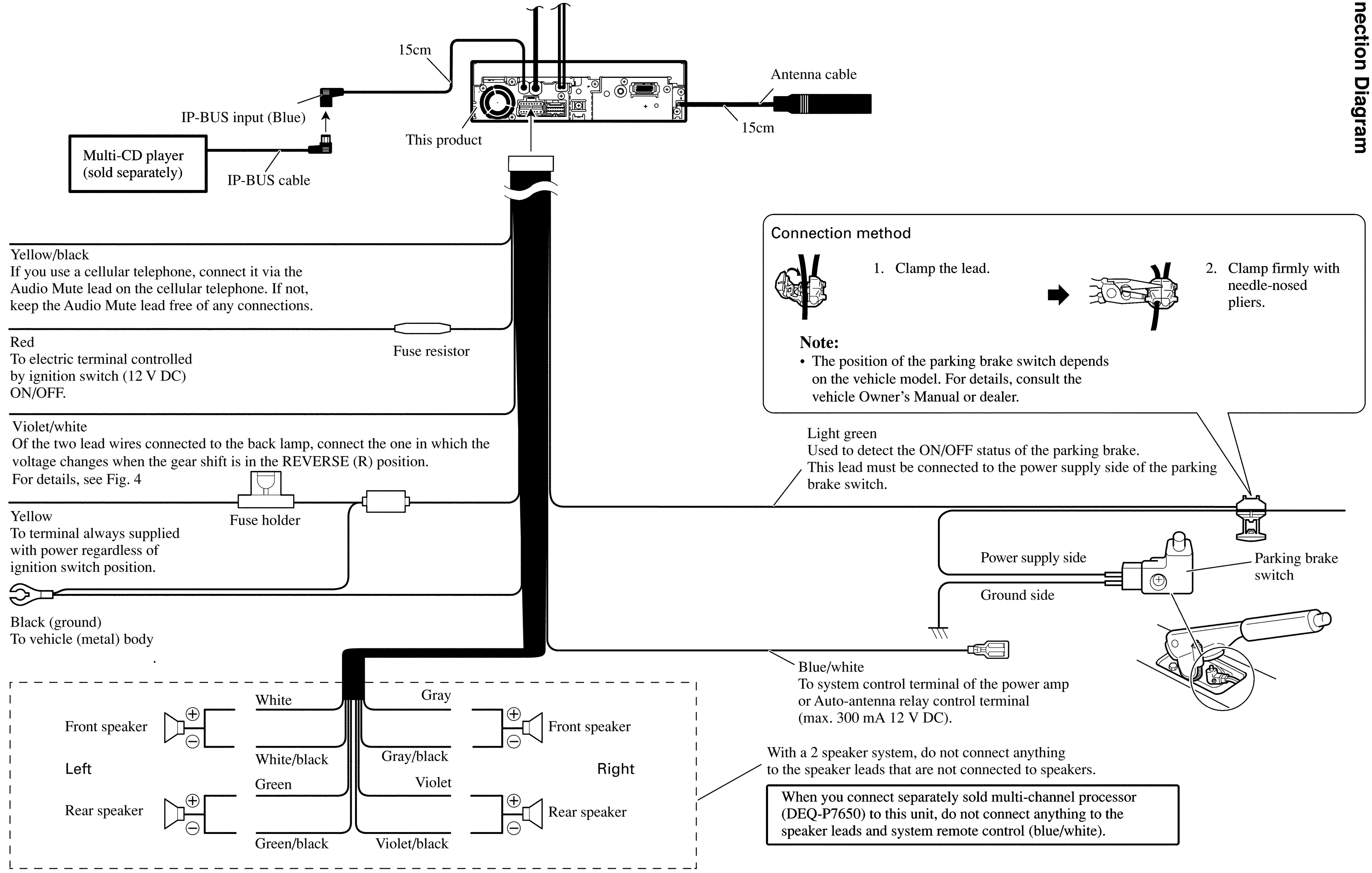


Attaching the front panel

● **Replace the front panel by holding it upright to the unit and clipping it securely into the mounting hook.** ▣

Connection Diagram

Connecting the power cord


15cm
IP-BUS input (Blue)
Multi-CD player (sold separately)
IP-BUS cable
This product
Antenna cable
15cm
Fuse resistor
Fuse holder
Power supply side
Ground side
Parking brake switch
White
White/black
Green
Green/black
Gray
Gray/black
Violet
Violet/black
Front speaker
Left
Rear speaker
Front speaker
Right
Rear speaker

Connection method

1. Clamp the lead.
2. Clamp firmly with needle-nosed pliers.

Note:
- The position of the parking brake switch depends on the vehicle model. For details, consult the vehicle Owner's Manual or dealer.

Yellow/black
If you use a cellular telephone, connect it via the Audio Mute lead on the cellular telephone. If not, keep the Audio Mute lead free of any connections.

Red
To electric terminal controlled by ignition switch (12 V DC) ON/OFF.

Violet/white
Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position.
For details, see Fig. 4

Yellow
To terminal always supplied with power regardless of ignition switch position.

Black (ground)
To vehicle (metal) body

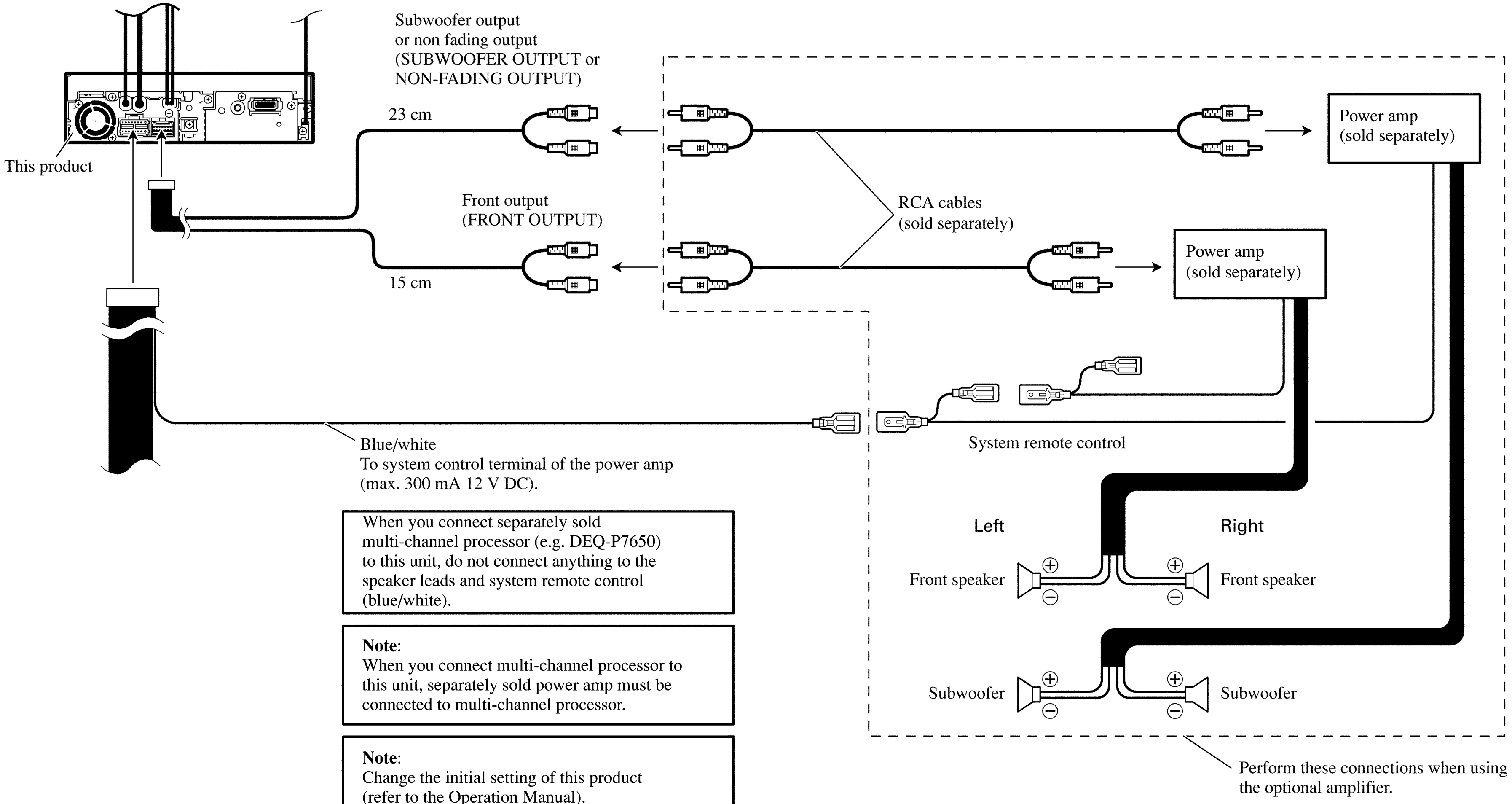
Light green
Used to detect the ON/OFF status of the parking brake.
This lead must be connected to the power supply side of the parking brake switch.

Blue/white
To system control terminal of the power amp or Auto-antenna relay control terminal
(max. 300 mA 12 V DC).

With a 2 speaker system, do not connect anything to the speaker leads that are not connected to speakers.

When you connect separately sold multi-channel processor (DEQ-P7650) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

When connecting to separately sold power amp


Subwoofer output
or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
23 cm
This product
Front output
(FRONT OUTPUT)
15 cm
RCA cables
(sold separately)
Power amp
(sold separately)
Power amp
(sold separately)
Blue/white
To system control terminal of the power amp
(max. 300 mA 12 V DC).
System remote control
Left
Right
Front speaker
Front speaker
Subwoofer
Subwoofer
⊕
⊖
Perform these connections when using
the optional amplifier.

When you connect separately sold multi-channel processor (e.g. DEQ-P7650) to this unit, do not connect anything to the speaker leads and system remote control (blue/white).

Note:
When you connect multi-channel processor to this unit, separately sold power amp must be connected to multi-channel processor.

Note:
Change the initial setting of this product (refer to the Operation Manual).
The subwoofer output of this unit is monaural.

When connecting with a rear view camera

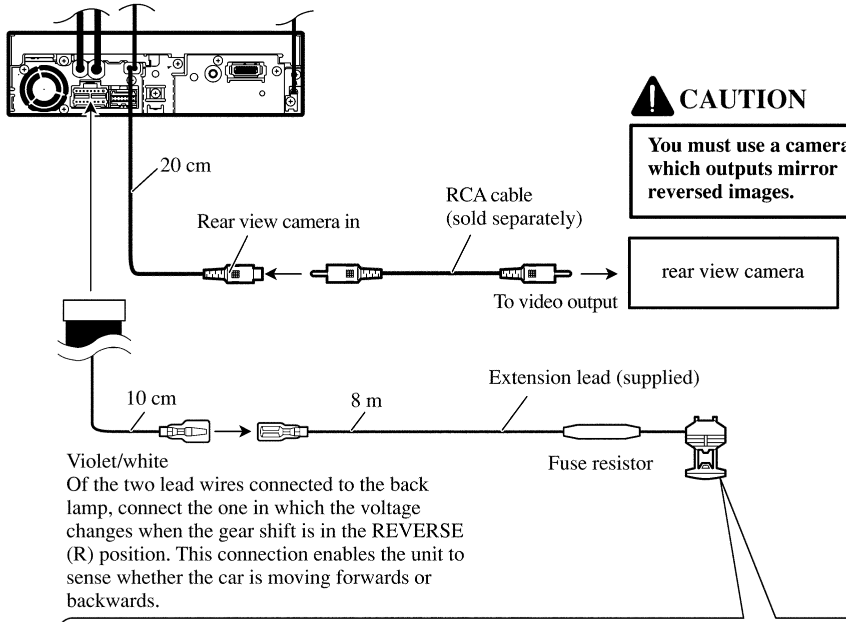
When using this product with a rear view camera, automatic switching to video from a rear view camera when the gear shift is moved to **REVERSE** (**R**) position is possible.

⚠ WARNING

USE INPUT ONLY FOR REVERSE OR MIRROR IMAGE REAR VIEW CAMERA. OTHER USE MAY RESULT IN INJURY OR DAMAGE.

⚠ CAUTION

- The screen image may appear reversed.
- The rear view camera function is to use this product as an aid to keep an eye on trailers, or backing into a tight parking spot. Do not use this function for entertainment purposes.
- The object in rear view may appear closer or more distant than in reality.


20 cm
Rear view camera in
RCA cable
(sold separately)
To video output
rear view camera
10 cm
8 m
Extension lead (supplied)
Fuse resistor

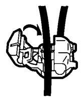
⚠ CAUTION

You must use a camera which outputs mirror reversed images.

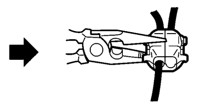
Violet/white

Of the two lead wires connected to the back lamp, connect the one in which the voltage changes when the gear shift is in the REVERSE (R) position. This connection enables the unit to sense whether the car is moving forwards or backwards.

Connection method



1. Clamp the lead.

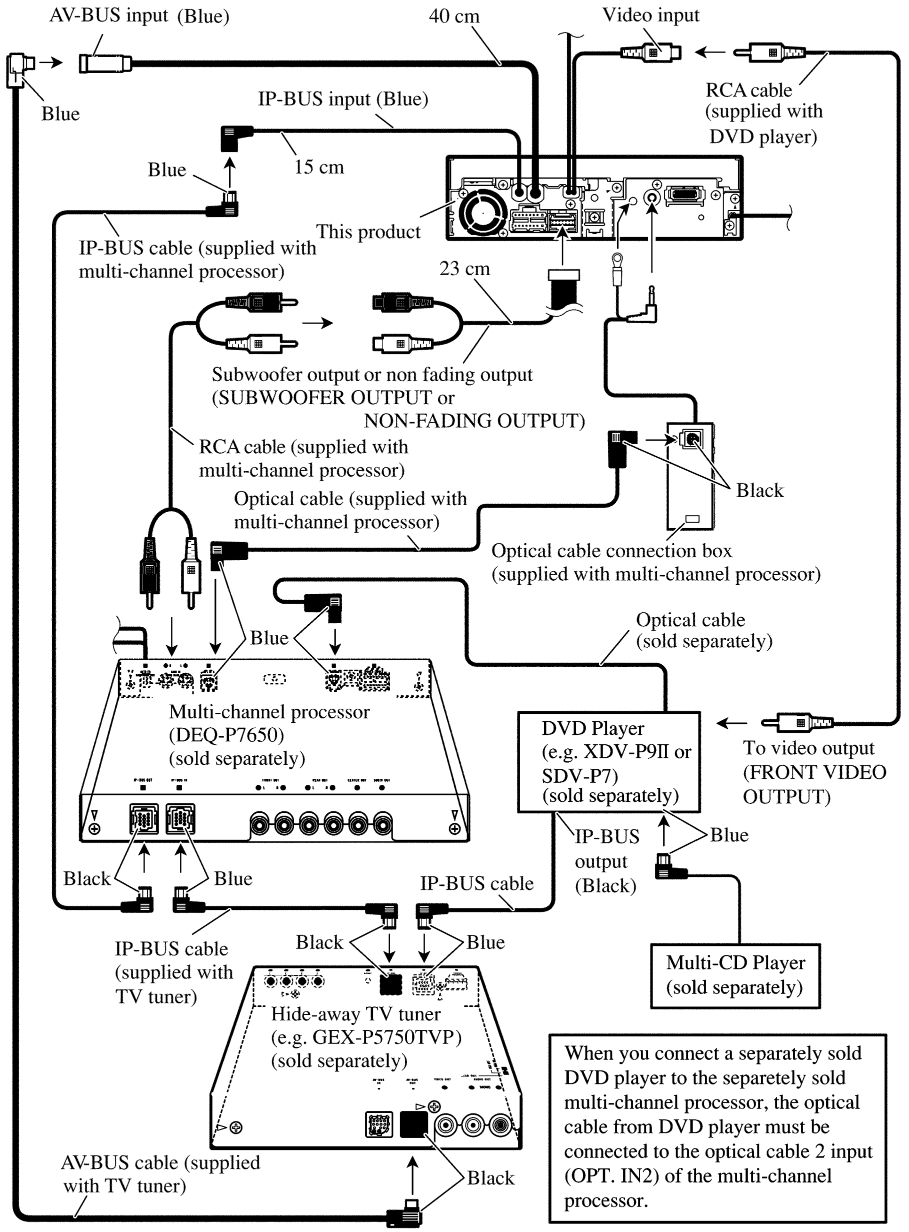


2. Clamp firmly with needle-nosed pliers.

Note:

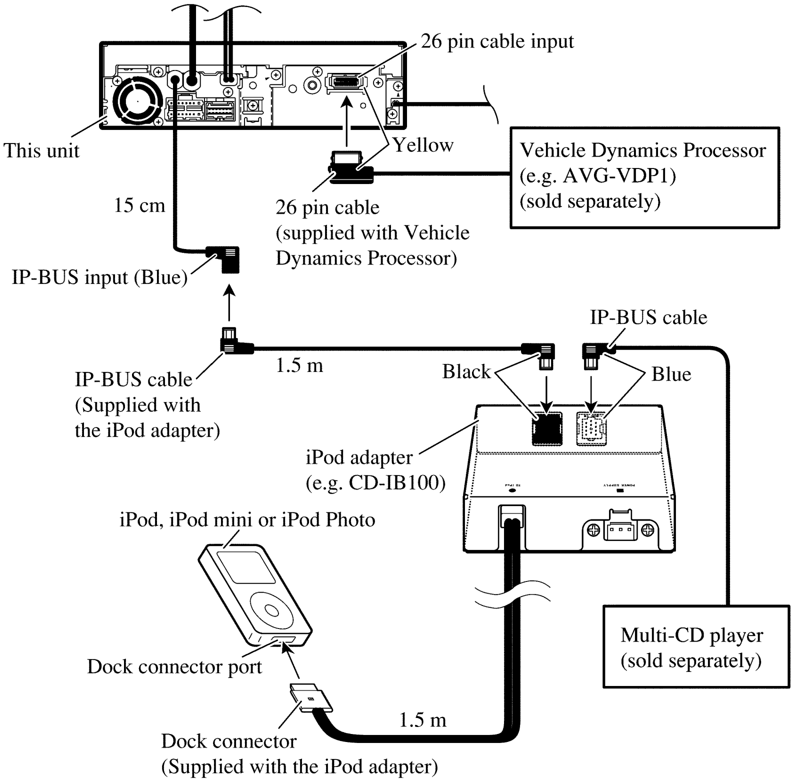
- It is necessary to set **B-CAM** to **ON** in **SET UP** when connecting the rear view camera.

When connecting with a multi-channel processor


AV-BUS input (Blue)
Blue
40 cm
Video input
RCA cable
(supplied with
DVD player)
IP-BUS input (Blue)
15 cm
Blue
This product
IP-BUS cable (supplied with
multi-channel processor)
23 cm
Subwoofer output or non fading output
(SUBWOOFER OUTPUT or
NON-FADING OUTPUT)
RCA cable (supplied with
multi-channel processor)
Optical cable (supplied with
multi-channel processor)
Black
Optical cable connection box
(supplied with multi-channel processor)
Blue
Optical cable
(sold separately)
Multi-channel processor
(DEQ-P7650)
(sold separately)
DVD Player
(e.g. XDV-P9II or
SDV-P7)
(sold separately)
To video output
(FRONT VIDEO
OUTPUT)
Black
Blue
IP-BUS cable
IP-BUS
output
(Black)
Blue
IP-BUS cable
(supplied with
TV tuner)
Black
Blue
Multi-CD Player
(sold separately)
Hide-away TV tuner
(e.g. GEX-P5750TVP)
(sold separately)
AV-BUS cable (supplied
with TV tuner)
Black

When you connect a separately sold DVD player to the separetely sold multi-channel processor, the optical cable from DVD player must be connected to the optical cable 2 input (OPT. IN2) of the multi-channel processor.

When connecting with Vehicle Dynamics Processor and an iPod adapter


26 pin cable input
This unit
Yellow
Vehicle Dynamics Processor
(e.g. AVG-VDP1)
(sold separately)
15 cm
26 pin cable
(supplied with Vehicle
Dynamics Processor)
IP-BUS input (Blue)
IP-BUS cable
IP-BUS cable
(Supplied with
the iPod adapter)
1.5 m
Black
Blue
iPod adapter
(e.g. CD-IB100)
iPod, iPod mini or iPod Photo
Multi-CD player
(sold separately)
Dock connector port
1.5 m
Dock connector
(Supplied with the iPod adapter)

A

B

C

D

E

F

Jigs List

Name	Jig No.	Remarks
Test Disc	GGV1018	Adjusting the skew
Screw lock	GYL1001	Adjusting the skew
33 pin extension cable	GGD1262	Connecting the monitor PCB to relay PCB(GGF1462)
Relay PCB	GGF1462	Connecting the monitor PCB extension cable to flexible PCB
Relay PCB	GGF1461	Connecting the monitor PCB extension cable to flexible PCB
20 pin extension cable	GGD1209	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1170	Connecting the mother unit to relay PCB(GGF1461)
40 pin extension cable	GGD1284	Connecting the mother unit to DVD mechanism module
2 pin extension cable	GGD1439	Connecting the mother unit to DVD mechanism module